THE PROBLEM OF METAPHYSICS AND THE MEANING OF METAPHYSICAL EXPLANATION

AN ESSAY IN DEFINITIONS

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THE PROBLEM OF METAPHYSICS AND THE MEANING OF METAPHYSICAL EXPLANATION

AN ESSAY IN DEFINITIONS

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BY

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PREFACE.

MOST of our differences in matters metaphysical are misunderstandings. We fail to apprehend one another's meanings, no matter how strenuously we strive to speak and write with precision, no matter how painstakingly we listen and read. Even in our own thinking half our problems are due to misleadings of the thought's language or habit. The terms we use, the images, the abstractions and symbols, tend ever to lead us awry; for each of these is compounded of remnants of old constructions and of manners of thought long discarded, which yet, in spite of us, insidiously enter into and weaken the structure we aim to build anew.

For such reason the essay at hand is in the form of a study of terms. It endeavors to define our more elemental metaphysical concepts, and to show some shades of meaning conveyed by the words we use, aspects we might emphasize, distinctions we should render clear. But in this the author does not attempt encyclopædic lexicography: it is not his purpose to give exhaustive definition nor full historical exposition of the meaning of any term. It is only for method that the essay proceeds by definition; its purpose is to outline as clearly as possible the central problem and import of all metaphysic, and for the accomplishment of this no method is likely to prove so fruitful as the Aristotelian study of concepts. But in the work here given it must not be understood that there is any endeavor at metaphysical construction. In all ways effort has been directed to the avoidance of this. Necessarily even in outlining the problem something of bias, some inkling of a favorite mode of

thought, finds expression; and so much must be allowed to the individual equation in any man's writing. But final solutions remain unattempted.

In this preface it may not be amiss explicitly to state certain convictions implied in the thinking here out-wrought. First there is a conviction that metaphysic is not a science of things ultimate in the cosmos, but of things ultimate in human life and destiny and ultimate only for human insight; that consequently, metaphysical solutions must change as the human outlook changes, and that the way of our thought must develop as our powers of intuition become enlarged. No final metaphysical solution is possible, because so long as human intelligence broadens metaphysical truth must alter. It is not independent nor static, but exists for knowledge alone.

That there is need to-day of a new metaphysic, a new vision of man's destiny, a new and virile exaltation of his ideals,—this, too, is a conviction underlying these writings. But the time for the great work is not yet. First must be written, as unmistakably as the century past has written the body's genesis, the genesis and evolution of the mind. To this task the natural sciences and the science of history, the varied branches of anthropology, psychology, philosophy in its manifold fields, all must contribute. And when the task is performed, or even in large part performed, forth shall arise the new synthesis, the new world-vision, and it shall be inevitable in its inspiration. But before that day we who hope for the advent must cleanse and order our house of thought, we must come to an understanding with ourselves and achieve some sane understanding of the metaphysic wherewith we were born. It is for the furthering of this humbler, but not unessential end, that this essay was written.

May 2, 1902.

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CHAPTER I

THE DESIRE TO KNOW

1. Our speculative curiosity about the world is commonly conceived to be of more than one type. It varies in form and mood, and according to these variations is differently designated. There is, first, the mere curiosity to know, the desire for knowledge for its own sake, as we say. And this we speak of as either a metaphysical and wholly speculative interest in the ultimate nature of things, or, where the concrete and the fact appeal most to us, as a purely scientific interest. To be sure the two types of interest go hand in hand, or rather the effort to satisfy either one is bound to lead to the range of speculation pre-empted by the other. The effort fully to explain the concrete fact lures the scientist inevitably into the metaphysical shadow-land; the effort to understand in universals and totalities compels the metaphysician just as inevitably to verify, exemplify and incarnate his abstractions in the facts. For the scientist the first curiosity is about phenomena, for the metaphysician about essences; but the complete satisfaction of either interest must be identical with that of the other. Only in point of departure do they differ.

But it is not alone the scientific or the metaphysical interest that leads to speculation. There is a third type, which is never mere curiosity nor purely speculative. This is our human interest in the world. It is a lively and personal concern for knowledge that may serve human welfare and reveal human destiny. When this interest is merely and immediately utilitarian we call it practical interest in

facts and things, but when it springs from a deep unrest that forgets the immediate, and will content itself only with readings of the riddles of fate, it becomes, in a larger sense, a human interest. It makes no talk of knowledge for the sake of knowledge; it feels no abashment in the face of immutable fact. Instead, it desires knowledge that may avail human need, and iterately demands the meaning of Nature for man.

It is, then, in mood rather than in object that the human interest differs from purely speculative curiosity. It is never impartial and impersonal. It is an anxious interest, with desires and aspirations for which it hopes to find a reason and a satisfaction in the nature of things. In short, it feels the legitimacy of the more intimate requirements of the human soul, and the urgency of these as well as of intellectual needs. This, I take it, is what Professor James contends for in that eloquent plea for the rationality of faith, *The Will to Believe*.[1] It is the determining influence upon our beliefs of our "passional nature"—our desires, faiths and hopes—which he wishes to assert, and the just warrant for such determination which he wishes to defend.

Let it not be understood that because the human interest springs from other needs than the intellectual, this need must yield to them its pre-eminence. It may be only a matter of psychical constitution, only a psychical necessity, but with most of us the final determination of belief must rest with the intellect. Faith cannot hold against our better judgment. But the kind of interest that we most feel can determine what problems we shall study. And wherever there is what Professor James calls "a genuine option," wherever the choice of propositions is indifferent to the intellect, "our passional nature not only may, but must, decide" (p. 11). Or, as he elsewhere says: "Of two conceptions equally fit

[1] *The Will to Believe and Other Essays in Popular Philosophy* (Longmans, Green & Co., 1897).

to satisfy the logical demand, that one which awakens the active impulses or satisfies other aesthetic demands better than the other, will be accounted the more rational conception, and will deservedly prevail" (p. 76). Finally, the measure of explanation adequate to the impersonal needs of the intellect, yet failing to satisfy our more vital concerns, may be supplemented, and ought to be supplemented, by explanations that will quiet these concerns, always provided we do not affront that consistency of thought which is the norm and token of our sanity.

2. Interest of any type, considered with reference to itself alone, is a psychical phenomenon. And the satisfaction of it must also be psychical. A satisfying explanation, in this light, can have only psychical validity; that is, unless it satisfies mental need, it is worth nothing. This is true of the ratiocinative responses to our impersonal speculations just as surely as of knowledge by faith. If we have a truth of which we are satisfied, we do not pretend to go beyond the feeling of certitude in our own minds for warrant of its genuineness. We have all that our interest can demand.

Yet while every operation of the mind must be psychical in this broad sense and every final validity a psychical validity, there is no less reason for rational explanation, just as there is no less absolute dependence of all other explanation and satisfaction upon the rational. Only the reason does not lie in the interest or curiosity itself, either as mere desire to know or as emotional yearning for truth, but rather in the organic need which gives rise to these and in the biological function which they subserve. The reason for our impulsive curosity about the world must be sought in the history of the mind's action and the mind's need; and the meaning and necessity and worth of each type of interest that we feel and each kind of satisfaction that we require must be read in terms of organic reaction.

To illustrate let me quote once more from Professor James: "The utility of this emotional effect of expectation is perfectly obvious; 'natural selection,' in fact, was bound to bring it about sooner or later. It is of the utmost practical importance to an animal that he should have prevision of the qualities of the objects that surround him, and especially that he should not come to rest in presence of circumstances that might be fraught either with peril or advantage —go to sleep, for example, on the brink of precipices, in the dens of enemies, or view with indifference some new-appearing object that might, if chased, prove an important addition to the larder. Novelty *ought* to irritate him. All curiosity has thus a practical genesis. We need only look at the physiognomy of a dog or horse when a new object comes into his view, his mingled fascination and fear, to see that the element of conscious insecurity or perplexed expectation lies at the root of his emotion" (pp. 78–79).

Perhaps in this "ought" which impels curiosity in the natural world, we have the real reason for that instinctive interest in naked fact with which scientific speculation begins. However impersonal our love for truth may seem, however complete an end in itself our grasping for facts, there yet remains a reason and a purpose behind the conscious interest—a meaning of the psychical fact to be found only in organic need. The impulse to know is the conscious sign of this need, just as irritation at novelty is its sign in the animal. And the "ought" is just as imperative and significant.

We pass, then, beyond the given fact of a scientific interest to find its meaning. Neither its given psychical content nor its objective intent can give us its *raison d'être*. For this we must look to its genesis and to its biological function and attainment. But if this is true, the scientific and the practical interest do not essentially differ. The

purpose of each is utilitarian; to familiarize with environment, as means to self-help, is their common aim. It is only in given psychical content that the two interests vary. The impulse or mood of the pure scientific interest is mere curiosity—an inexpugnable and insatiate curiosity, it may be, but not different in kind from the expectant inquisitiveness of the animal. It is a curiosity that recognizes no conscious reason for itself or purpose beyond its immediate satisfaction. Its motive is not felt nor its use seen. On the other hand, the practical interest—and this, of course, includes interest in 'practical science'—is distinguished by the fact that it is curious for a purpose which it feels and understands. Its motive and its aim are in consciousness, and these constitute a reason for it behind which only a theoretic interest can lead. There may be other reasons for it, but they belong to a larger view of life than itself implies.

The human interest is like the practical, of which it is the deeper expression. Its reason is to be found in conscious motive and conscious aim. It asks, not for the sake of asking, nor from any blind inner urgency, but from the no less urgent and necessary desire to read its own future and decipher the laws that govern the way of human life. Very likely its purpose is not different from that of the purely speculative interest, but it knows this purpose and it owns its motives and directs its attention to avowedly personal ends. Pure speculative curiosity is but an economy of nature; for where little will suffice, nature is not bountiful. It is the human interest denuded of all its wealth of motive: it is a naked curiosity the reason for which is suppressed—possibly that it may do its work the better. But when we ask after this reason, we find that it is not other than human need.

3. In extending the meaning of human interest to cover spceulative curiosity, in the broadest sense of the latter

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term, I have included what was called the metaphysical, as well as the scientific, interest. For the metaphysical interest, too, comes in response to human need. Impersonal and abstruse as its object may seem, the meaning of the interest can only be personal and vital. It searches out the uttermost parts of the universe, but it searches only because of the possible human significances that may lie therein. And it desires to know the whole of the universe only because possibility of such significances cannot be exhausted until the whole is known.

The immediate incitement of metaphysical interest is experience—experience in the wide meaning Kant gave to it, as including every possible extension of knowledge. The metaphysician is concerned with what is most remotely related to human experience as well as with what is most immediately given within it, but he is concerned at all only in order that he may read into what is yours and what is mine its fullest and richest content. He analyzes the fluid of sense to its final elements, he journeys the distances of the universe, but only in order to return to reality more than its native possession. He abstracts, but only in the faith that the chain of dead abstraction will lead inevitably back to the concrete and the living. Aristotle was the first to see that metaphysical analysis must return to us a world as complex, brilliant and multitudinously varied as that whole luminous world the Greek mind knew. He was the first to feel the need of accounting for all its change and seeming as well as its stable realities. Kant was the first to tell us that this world could be known and organized only as a world of experience—as *the* world experienced. And in the attitudes of these two thinkers is defined for us the object of our metaphysical interest.

In asking what constitutes an adequate metaphysical explanation, we are concerned first of all with the conditioning

of intellectual satisfaction. What is knowledge? What the object of knowledge? The principles of explanation? Truth? But we are also concerned with the adequacy of the explanation to the totality of our needs, to our human interest; and we cannot have any finally valid explanation until all these needs are met and all our interests satisfied.

CHAPTER II

THE MEANING OF KNOWLEDGE

4. There is a question of real importance the answer to which is all too likely to be taken for granted. What is the meaning of knowledge? What is it to know? For there are ambiguities in the use of the word, and different meanings and double meanings, which ought to be cleared up.

At first glance this question may seem a little trite—a bumptious asseveration of the thousand-year-old problem of all philosophy and all science. Or, if the knowing process comes to mind, one may be referred to the science of logic, whose very province it is to define this process, or to the science of epistemology, the whole concern of which is to discover how knowledge can be, or to psychology, which analyzes for us our perceptions and ratiocinations. But any such reference would be based upon misunderstanding of a more modest purpose. For the question is not meant to be how we know, nor how we can know, nor why, nor yet what is the content of our knowledge, but only in what different senses do we use the term. That there are different senses I think no one accustomed to follow philosophical discussions will deny, and it goes without saying that such differences ought to be clearly discriminated.

5. Psychically, and apart from its object and its truth, knowing is nothing more than a feeling of certitude. It is belief with all the element of doubt eliminated, a belief so positive as to preclude the possibility of any alternative belief. It may be immediate perception, it may be rational conviction, it may be a naïve faith which has never ques-

tioned; but in each case, if it is real knowing, it is bound to possess the hypnotic inevitability of the fixed idea or of emotional obsession. It is, in short, that necessity for thinking real a sole possibility for which Mr. Bradley so effectually argues;[1] or, where no thought is, it is the certitude of mere feeling.

The feeling of certitude is not necessarily a feeling of constraint. It may be so, and is very likely to be so, where the facts run counter to our wishes. It is not infrequently that we rebel against the logical necessity of judgment when the necessary judgment seems cruel to us, or feel a sort of dumb desperation at the oppressive brutality of facts, or find in the whole world nothing so irrational as reason. But normally there is no such conflict between our emotional and cognitive states. Normally, knowing is frictionless, or even a kind of pleasure in itself. It is rest in a content of knowledge suffering no disagreeable proddings from inquisitorial alternatives.

Professor James describes this state in his ever unapproachable way:[2] "The transition from a state of puzzle and perplexity to rational comprehension is full of lively relief and pleasure. But this relief seems to be a negative rather than a positive character. Shall we then say that the feeling of rationality is constituted merely by the absence of any feeling of irrationality? I think there are good grounds for upholding such a view. All feeling whatever, in the light of certain recent psychological speculations, seems to depend for its psychical condition not on simple discharge of nerve-currents, but on their discharge under arrest, impediment or resistance. Just as we feel no particular pleasure when we breathe freely, but a very intense distress when the respiratory motions are prevented, so any unobstructed ten-

[1] *The Principles of Logic*, book 1, chap. viii; book 3, part 2, chap. iii.

[2] *Op. cit.*, "*The Sentiment of Rationality*," pp. 63–64.

dency to action discharges itself without the production of much cogitative accompaniment, and any perfectly fluent cause of thought awakens but little feeling; but when the movement is inhibited, or when the thought meets with difficulties, we experience distress. It is only when the distress is upon us that we can be said to strive, to crave, or to aspire. When enjoying plenary freedom, either in the way of motion or of thought, we are in a sort of anæsthetic state, in which we might say with Walt Whitman, if we cared to say anything about ourselves at such times, 'I am sufficient as I am.' This feeling of the sufficiency of the present moment, of its absoluteness—this absence of all need to explain it, account for it, or justify it—is what I call the sentiment of rationality. As soon, in short, as we are enabled from any cause whatever to think with perfect fluency, the thing we think of seems to us *pro tanto* rational."

6. In this sense of psychical self-sufficiency all knowledge is immediate. It has the immediacy of any mental state or feeling. But there is another sense in which we speak of immediate knowing, and by which we intend to discriminate between it and mediate or representative knowing. And this is the discrimination which is most essential to clear philosophical thinking. It is the distinction between what is actually and what is symbolically present in the mind, between what we are *aware of* in some sense or other, and what our thought means or *stands for*.

The primitive, and I may add, the ultimate type of knowing is just this awareness of somewhat which characterizes immediacy. It is immediate perception, insight, intuition. Any object of knowledge which is present in experience—which is experienced, that is to say,—is thus known. Whether the experienced thing is a psychical or a real thing makes no difference: in so far as it is experienced, it is intuited and actualized—that is what we mean by "experiencing" anything.

This type of knowledge asks no questions. It refers to nothing beyond itself. So far as it succeeds in winning its insights, it is perfectly self-sufficient and satisfied. It is, in short, for the objective aspect of knowing, all that the feeling of certitude, or Professor James' "sentiment of rationality," is for the subjective. And it differs from this feeling only in extension; for certitude may subjectively characterize any knowing whatsoever, whereas immediacy,—or objective certitude, shall we say?—is definitely restricted to certain classes of cognitions.

Hamilton makes the distinction between immediate or intuitive and mediate or representative knowledge with his usual ponderous explicitness;[1] for, as he observes, it is a distinction of considerable importance to the natural realist. "In an immediate cognition," he says, "the object is single and the term unequivocal. Here the object in consciousness and the object in existence are the same; in the language of the schools, the *esse intentionale* or *representativum*, coincides with the *esse entitativum*. In a mediate cognition, on the other hand, the object is two-fold, and the term equivocal; the object known and representing being different from the object unknown, except as represented." And again: "An intuitive cognition, as an act, is complete and absolute, as irrespective of aught beyond the dominion of consciousness; whereas, a representative cognition, as an act, is incomplete, being relative to, and vicarious of, an existence beyond the sphere of actual knowledge. . . . In their relations to each other, immediate knowledge is complete, as self-sufficient; mediate knowledge, on the contrary, is incomplete, as dependent on the other for its realization."

That this distinction should have been overlooked by "those who allowed no immediate knowledge to the mind, except of its proper modes," is hardly to be wondered at, in

[1] *Lectures on Metaphysics*, Lecture xxiii.

Hamilton's opinion. "But it is more astonishing that those who maintain that the mind is immediately percipient of external things, should not have signalized this distinction; as on it is established the essential difference of perception as a faculty of intuitive, imagination as a faculty of representative, knowledge."

It is perhaps a just criticism of extreme idealists, such as Berkeley, whom Hamilton doubtless has in mind, that an important discrimination is elided, if not overlooked, in their thinking. Even if the *esse* of things is *percipi*, the *esse* of ideas "perceived by attending to the passions and operations of the mind" or of those "formed by help of memory and imagination" is certainly not *percipi* in the same sense. Nor does the difference lie merely in objective necessity; the table that is seen and the table that may be seen at will are known in equally compulsory cognitions. The difference is rather one of meaning and is fundamental in experience.

Berkeley uses 'intuition' in a different sense from that which Hamilton gives it. With Berkeley it means a rational rather than a sensory immediacy; as, writing of the existence of objects in the perceiving mind: "I think an intuitive knowledge may be obtained of this by any one that shall attend to what is meant by the term *exist* when applied to sensible things."[1] Here "intuitive knowledge" unquestionably designates a rational process.

Hume's division of the sources of our knowledge into 'ideas' and 'impressions' tends to bring out the distinction, but it is half obliterated again in his thesis that "ideas in their first appearance are derived from simple impressions, which are correspondent to them, and which they exactly represent."

Natural realism is itself open to criticism on this score

[1] *Principles of Human Knowledge*, sec. 3.

when it uses immediate or intuitive knowledge to designate knowledge of reality. If the object of such knowledge is "known as actually existing," its reality "given unconditionally as a fact," as Hamilton says it is, there is no room for any discrepancy between reality and our immediate knowledge of it; error is impossible; the being of the thing is bound to be, if not the perception of it, at least just as it is perceived. And this we know is not the fact in actual experience. If ever natural realism is to be rehabilitated, it must (1) distinguish between immediate knowledge and its truth, and (2) tell just what is the content immediately known. It must resolve itself into an empirical realism.

A test of immediacy in knowledge is not easy to find. Whatever it may be, it must lie within the consciousness constituting the cognitive state; it must be a conscious sign of some sort, just as the feeling of certitude is the conscious sign of knowledge in general. The immediately known is not distinguished by any particular kind of certitude; nor by the exercise of a greater compulsion; nor yet by the superior vividness of its presentational elements (for ideas recognized as representative may be even more vivid than our dimmer perceptions). The mark of immediacy is rather to be found in the nature of the reference of the knowing state. The content immediately known is one that does not refer beyond itself; it is one that means just what it is, one in which the *esse intentionale* and *esse entitativum* do really coincide. Such a state is not necessarily confined to perception of things; it may be introspectively centered on psychical phenomena. And it cannot be sharply distinguished from representative knowledge, for Hume's contention that ideas and impressions eventually merge into one another appears to be well founded. Nevertheless in practical as well as in philosophical thinking we do distinguish the two types of knowing, and the ground of our distinction

seems to lie in the greater self-sufficiency of the type we call immediate.

With Kant intuition (*Anschauung*) was used only as the description of knowledge embodied in sense impressions and in time and space as the pure forms of sensibility. All that is given from without, the stuff of the external world, is given in such intuition. But the world that is immediately given to us is no mere chaos of rhapsodical sensations: it is the organized world of experience. It is objects and things that are immediately known. And in order to account for this fact, we have the doctrine of pure *a priori* forms of the understanding, the categories, or concepts, without which "perceptions would belong to no experience at all, would be without an object, a blind play of representations,—less even than a dream."[1]

It is this governing function which the Kantian categories exercise over experience that gives dignity to the mind's rôle. It shows us that the compulsion of fact comes not wholly from without. The world is given as a rational world, and our immediate knowledge of it is *insight* as well as *intuition*.

To my mind this is a distinction of some significance. It suggests a clue to possible indefinite extensions of immediate knowing. Rational insight—an insight which shall hold in poise all the tortuous intricacy of the most subtle analysis together with the most daring reaches of generalization—may be the final type of knowledge. Often enough we have experiences that bear some analogy to this—a consciousness which grasps some elusive, sought-for truth, grasps and struggles with almost breathless endeavor to hold it but for so long as may serve to impress the course of its laborious elucidation upon the mind. Such thought is an end in itself, far away from our ordinary ideas as it may

[1] *Critique of Pure Reason* (Max Müller's translation), p. 92.

be. The difficulty with it is the difficulty of high altitudes —we cannot quite catch our breath. But its charm, too, is the charm of the heights—the same quick throb, the same exhilaration.

In his chapter on "Noetic Synthesis,"[1] Dr. Stout gives a clear exposition of what may be inferred as to this type of knowing. In the ordinary consciousness it is an "apprehension of the whole which determines the order and connection of the apprehension of the parts," and this "schematic apprehension of a whole is as much a distinct content of consciousness and a distinct factor in mental process, as is the sensation of red or blue." But there are degrees of this synthesis quite impossible for the ordinary consciousness to conceive, as in the marvelous mathematical calculations of the boy Colburn, or the case of Mozart, who held whole symphonies in mind at once. Immediate knowledge such as this is altogether beyond the ken of the common mind.

7. It is only because we cannot win immediate insight into everything that representative knowledge is needed. Our intellectual necessities are far too complex to be satisfied with the slow-going intuitions of sense, and our powers are not sufficiently developed to enable adequate measure of the insights of pure thought. Consequently the greater portion of our knowledge is mediate, or representative.

There is a certain contention of modern critical realism that knowledge in its very nature implies a chasm between knower and known, that it must be "knowledge *of* an object *by* a subject," and consequently that the known, if it is an existent reality, can never *be* in consciousness.[2] The known and the real must exist "extra-consciously" and "trans-

[1] *Analytic Psychology* (Swann, Sonnenschein & Co., London, 1896).

[2] "The Problem of Epistemology," by Andrew Seth, in *Philosophical Review*, vol. i.

consciously," in the same world with the knowledge, but ontologically different from it. The interest of this position lies in its denial of immediate knowledge in the sense held by the natural realist. The intermediation of the perceptive process between the knower and the known is taken not as proof of idealism, but of the reality of that difference between knower and known of which the naïve consciousness is so thoroughly aware.

But this very naïve awareness is sufficient reply to any contention that seeks to find a chasm between the two factors of knowledge. To be aware of anything is to be directly conscious of it, to possess it in consciousness (not, therefore, in the head). There need be no identification of the knowing self and the known thing, but we are forced in the case both of the self and the thing to use the adjective for an adequate description of them in relation to one another, and there is no warrant whatever for attaching all the meaning of knowledge to the self that knows.

All knowledge must be knowledge *of* something or other. But that does not prevent the knowledge from being immediate nor its object from being in consciousness, be it knowledge of psychical state, or of idea, or of real thing. It is only when what is immediately known in consciousness stands for some experience that is not in consciousness, that we are at all warranted in saying that knowledge of anything implies a chasm between the knowledge and the thing, and then only in a different sense from that in which we distinguish the knowing self and its object. In this different sense the chasm exists between a symbol and its meaning[1] —between an idea, for example, and the fulfillment of its implications in experience. It is a chasm between what is represented and its representation, and however relative a

[1] An especial acknowledgment is due to Mr. Bradley's admirable treatment of this subject in *The Principles of Logic.*

chasm it may be, it is the basis for our special discrimination of mediate knowledge.

There are two types of representative knowledge, and they are distinguished not by the content of the representations, but by the nature of their reference to the objects represented. The first of these types comprises the great body of human knowledge, and may be designated 'descriptive representation.' The objects denoted by its symbols are known quantities—that is to say, we can at any time, actually or conceivably, substitute an intuitive content for the symbolical content. The thing symbolized is always (theoretically, at least) a possible object of immediate experience. The symbol employed in the thought is confessedly an abstraction from the thing (if an image), or a sign of such abstraction (if a word); and its concrete experiential value is always as ready at hand for substitution as is the known quantity for its symbol in algebra. Substitution, in fact, is the final test of validity for all knowledge of this type.

The second kind of representative knowledge may be termed 'symbolical representation.' Here the object represented bears more analogy to the unknown algebraic quantity. What we have given in consciousness is an x—a symbol of something other than itself, the reality of which cannot be substituted for its representative. This is because the symbol is not now a product of abstraction, or, if it be so, it is adapted to represent something quite different from the object from which it is abstracted. It represents rather something outside the range of intuitive experience and external to consciousness.[1]

The origin of all symbols must eventually be found in immediate experience. The content of the symbol is of the texture of experience. There can, then, be no reason for affirming any similarity of symbol and symbolized when the

[1] For further discussion of the possibility of such meanings, see chap. iv, sec. 17.

latter is professedly extra-conscious. Intuitive knowledge itself—that is, immediate experience of anything—might be taken, and by some thinkers is taken,[1] as symbolical of a trans-conscious known. But when so taken there is an unfortunate tendency to lose sight of the symbolical nature of the intuition and to imagine that we perceive an immediate similitude between the symbol and the reality, whereas what we have is only a sign of an existence.

Representative knowledge of this purely symbolical type has no *a priori* right ever to become anything other than representative. There is, *a priori*, no possibility of substituting the object of knowledge for its symbol, nor of affirming any likeness between object and knowledge. The chasm is a real one. All that we can affirm concerning this x, this unknown, must be derived *a posteriori* from the grounds upon which we come to assert its existence in the first place. And these grounds must lie wholly within our experience—that is, within the range of our intuitive knowledge and its ideal extension by means of representative knowledge of the descriptive type. The object of knowledge in symbolical representation is inferred, and inferred not from any necessarily symbolical nature of x (which may be arbitrarily chosen), but from some necessity or probability to be found in intuition or in the ideal extension of it.

The meaning of x is thus, in a way, a created meaning, attached to it apart from any inner necessity. This meaning, in so far as it is a designation of some object external to consciousness, is the knowledge that x represents; for the thing meant, by hypothesis, can never be cognized. As to what the meaning may be there are two alternatives: (1) it may be mere existence, a bare assertion that somewhat or

[1] It is only in this sense that I can understand many of the expressions used by Mr. Bradley and Mr. Bosanquet in their discussions of "immediate contact with reality" in sense-perception.

other exists external to consciousness, with no attempt to determine or characterize this object; or (2) if any characterization beyond mere existence is made, it can only be a predication of the similarity of the object represented to some content of intuitive knowledge. We can qualify, in other words, only in terms of our experience, and our ultimate reference must always be to immediate intuition.

8. It is just such interpretation of an object of knowledge in terms of intuitive knowing that we mean when we speak of rendering anything intelligible. As heretofore said, intuitive knowledge is *par excellence* a knowledge which asks for nothing and refers to nothing beyond itself. It is in itself the intelligible. Intelligibility always means elucidation in immediate experience, and all our knowledge must be subject to such elucidation as its final test.

I do not mean to assert that the only valid knowledge must be intelligible in this sense. Probably we may assert as much of the only valuable knowledge. But that does not mean that there can be no criterion of validity that can establish the truth or actuality of a representative knowledge the whole content of whose assertion should be that there is existence external to consciousness. Into the more precise meaning of this, inquiry will be made hereafter.

In résumé: At least four distinct meanings of the term knowledge have been discussed. Of these, two fall under the head of immediate, and two under that of representative knowledge. Immediate knowledge may be (1) direct intuition of objects, ideas, or psychical states; (2) it may mean a rational insight by means of other than symbolical mental contents. Representative knowledge is either (1) descriptive representation, wherein the meaning is partly contained in the symbol or may readily be substituted for it; or (2) purely symbolical representation, wherein the

true meaning can never be substituted for the symbol, but must always lie beyond the reach of actual experience. Finally, it has been said that intelligibility must lie either in some content of immediate knowledge, or in direct reference to such content.

CHAPTER III

THE OBJECT OF KNOWLEDGE

9. WHEN thought begins to break loose from the constraint of concrete detail and to concern itself with abstract speculation, one of the first questions that it asks is, What is the object of knowledge? What is it that we wish to know or explain? And the answer almost invariably given by philosophers is, Reality or the Existent. Now it may seem either a quibble or a demand for a whole ontology to ask just what is meant by 'reality'; yet a very little experience of metaphysical juggleries with the term is sufficient to persuade any one who wishes to think clearly that the inquiry is continuously necessary.

A naïve realism which takes for granted the reality of passing experiences or distinguishes a real and an unreal for practical purposes alone, is the natural position of unreflective thought. It is the so-called "common sense" realism. And it is only when experience has shown us the unreliability of our senses and our perceptions, or when we encounter the perplexities of change and becoming, the beginnings and endings of things, that the naïve view gives way to reflection. It is then that we distinguish a *true* reality, compared with which what is furnished us by the senses is mere appearance or delusive shadowing; or, if it is the inconstancy of the phenomenal world that has most affected us, we endeavor to discover amid its change and transformation a *permanent* reality which we may contrast with the unreality of that which passes away.

Plato was the first clearly to perceive that the search for reality is a search for truth, and he sought to satisfy the logical requirements of the quest with his doctrine that Ideas, or ideal truths, alone are real; whereas the earlier philosophers had been content to ease their more proximate curiosity, occasioned only by the problem of change, in notions of elements, or permanent substances, underlying and persisting through transition. But Plato, not distinguishing the two aspects of the problem, carried over this very notion of permanence into his doctrine of Ideas. These were universal principles, and they were eternal; they were the world's truth and its enduring basis. Perhaps with Plato the Ideas were not pure abstractions nor wholly divested of a garb of mundane flesh and blood. Perhaps they were still of a plastic stuff of experience from which the intensely æsthetic Greek thought could not quite free itself. In any event it appears probable that such curious conceptions as of timeless eternity and of immortality through emancipation from a world of change into one of eternal truths,[1] owe their origin to this early confusion of the problems of reality.

The whole aim of Aristotle's *Metaphysics* is the determination and definition of reality (οὐσία); but he is by no means consistent in his developments of the concept. Sometimes he treats the real as a universal and permanent subject—"that of which all else is predicated without itself being predicated of anything else";[2] but at other times the reality seems to him most truly to be the concrete reality or essential being of the individual thing. It is in this second usage that we find in Aristotle the first effort to re-apply the concept on a philosophical basis to the realities of the naïve view. He felt the strength of natural realism as well as the

[1] This doctrine is elucidated in Professor Fullerton's brochure, *On Spinozistic Immortality* (University of Pennsylvania Publications, 1899).

[2] *Metaphysics*, book 9, chap. iii.

need for analyzing, the necessity of accounting for the manifold of change as well as for the permanent and universal. Each aspect of experience seemed somehow real to him, yet all the aspects were not real in the same way. In this hesitancy and puzzle is clearly foreshadowed that final view which seems to be the logical outcome of every speculative pursuit of an ultimate, whether Reality or Being or Spinozistic Substance, that in the end, in some sense or other, every phase of experience, the most transitory and phenomenal as truly as the most permanent, must be enveloped in the wide mantle of Reality.

It will readily be seen how many misunderstandings are apt to follow from the use of a term so ambiguous. The number of its meanings is practically indefinite: with each grade of philosophic thought and each advance in insight its significance varies. Nevertheless, we may distinguish certain typical principle meanings which will serve as guides in our interpretations of it. And these typical meanings are four in number.

I. In its widest signification 'Reality' is heteronymous with 'Existence' or 'Being' (also taken in widest extension). In this sense it denotes the sum-total of happenings in the universe—everything physical, psychical and transcendental,—in short, the universe itself as the all-inclusive. In such use of the word we should bear in mind that it ceases to have adjectival value. If it qualifies everything, it can distinguish nothing.

II. We may use 'reality' to designate the permanent or persistent, taken as that which underlies the changing and phenomenal. It is reality as subject or substance; and the real is distinguished from the unreal as the essential from the accidental.

III. Closely allied to this is the conception of reality as truth. In this sense reality is the essential for knowledge.

It is the true being of the generic and the universal as opposed to the falsehood of mere appearance. This meaning is seldom distinguished from the last preceding in those systems where it actually finds place; but logically it is distinct.

IV. The fourth meaning defines reality within experience. In the beginning it is the naïve view and is applied to the ordinary discrimination of the real and the unreal in our common experience. It is the sense in which things are real to us, real because subject to experimental tests, and because they persist under such tests. Permanence is here a mark of reality as in sense II, but the degree of permanence required and the kind of knowledge which we can have of the reality serve to differentiate the two meanings. For the permanence required of the underlying subject or substance is absolute, whereas the permanence of the real within experience is only a relative persistence, the standard being so variable that at times we are unable to say certainly whether an object is real or not. And as to our knowledge of these realities, we may know the real of experience immediately from the very fact that it exists as experienced, but the underlying reality can be known only representatively.

10. It is sufficiently plain what is meant by 'reality' and 'real things' in common speech, and it is plain, too, how they come to have their importance; that is, how they come to be real. The relatively persistent phenomena in the world are the most important to life activities. Speculation in futures counts from an evolutional point of view, and the notion that the enduring in experience is the essential and actual is formed in response to biological need. Ordinarily a real thing is one that satisfies practical necessities, and in so far as its capacity to meet these necessities is known we consider it explained and accounted for.

But we must not lose sight of the fact that this is the naïve

view, and that the satisfaction offered does not extend to speculative need. The indeterminateness and relativity of empirical reality can never content the speculative demand for an eternal and true reality, one that may be counted on not only to outspan human years and human centuries, but the uttermost limits of time; one that shall be true not only for my needs and my knowledge, but for the innermost essence of things; one that shall constitute the gist of the world.

The meaning of such a need is not revealed to us all at once. It is only by slow growths in insight, blind feelings of the way, that we come to realize the full significance of the metaphysical problem. And when first we reach to grasp our will-o'-the-wisp, it is with little suspicion of the wearying pursuit that is to follow. Now the ways in which we may take up the quest for reality are two. We may begin in the Aristotelian way with analysis of the empirical world, or we may undertake a dialectical inquiry into the nature of truth. Let it not be suspected that we must end in realism or idealism according to the method we adopt. Idealism and realism are but doctrines of the kinds of reality that may terminate our search; the search itself, whatever its method, is perfectly impartial. Plato's dialectic delivered unto him Ideas, but the no less abstruse dialectical philosophizing of the Scholastics did not endanger their thought's anchorage in an underlying substance of things; and the realism of Locke was no more an outcome of the empirical method than was the idealism of Berkeley.

In German philosophy since Kant the search for reality has been upon a different basis from that which determined the thinking of the English and Scottish schools. The reality which Locke defined by primary qualities, which Berkeley was concerned with denying and Hume with doubting, was no more than the 'absolute substance' of the Scholastics or

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the various 'elements' of ancient physical cosmologies. It was of this same reality, re-endowed with the sensuous richness which had been gradually stripped away, that the Natural Realists asserted immediate knowledge; and it is in place of this reality that John Stuart Mill offered us "permanent possibilities of sensation." In German thought, however, the notion of reality as underlying substance has never really gained a foothold; at least to the moderns it has ceased to be a "living option," to use Professor James' expression. It was the office of Kant to bring the real world, the world of warmth and color and flesh and blood, back from the Ultima Thule whither doubtings and denyings had banished it. True, he left in that vague region "things-in-themselves" to eke out their pale existence in unknown ways; but the meaning of reality was exhausted within the world of experience, and the shadowy being of the *Dinge an sich* seemed only irrational and exasperating to his compatriot successors.

The method of the English philosophers had been the method of empirical analysis. Kant gave to the German mode of investigation its dialectical turn. Not that the German method became invariably dialectic, or the reality which was sought necessarily a logical reality. The Kantian reality was indubitably empirical, as directly given in experience as the realities recognized by the Scottish philosophers; and the conceptions of reality held by Herbart and Lotze are the result of empirical rather than dialectical necessity. But the reality sought for by German empiricism appears never to have been quite so much an "other"—if I may use an Hegelism—to the knowledge of it, as was that of the British schools. There has rather been a tendency to find a point of contact or identity between the knowledge and the known real, an immediacy where the being in experience is the reality.

Hegel, of course, stands for the extreme in dialectical

method. As every exhaustive dialectic must show, his system shows us that in the end the universe as a whole, in its most evanescent as well as in its most stable aspects, in its contradictions as in its consistencies, is the object of our knowledge and the reality to be explained. 'Reality' must be taken as heteronymous with 'universe,' even at the risk of losing discriminative significance, for neither our purely speculative interest nor our practical human need will be satisfied with anything less than a world-comprehending explanation. The meaning of human life can be read for us to-day only in terms of the universe.

11. The most thorough-going dialectical development of the concept of reality by any English thinker is to be found in Mr. Bradley's *Appearance and Reality*.[1] With him the concept is primarily a logical one. Reality is the ultimate subject of all judgments and is itself not a predicate of anything. The very definition of judgment is "an idea predicated of reality" (p. 163).[2] Again, reality is discriminated from appearance as an existence from a quality, a bare occurrence from a content, a 'that' from a 'what.' Appearance is the unreal, and it is unreal because it is self-contradictory or non-self-subsistent. But appearance is also

[1] It is proper to preface any interpretation or criticism of Mr. Bradley's work with a note of explanation. It is not often that we find a philosophical writer who uses his terms with such genial vicariousness and at the same time clearly understands the differences implied by them. I have no doubt that Mr. Bradley finds nothing inconsistent in verbal contradiction. If I may be allowed the suggestion, his own mind performs very much the function of his Absolute, transmuting contradictions in a higher synthesis. But it is something unfortunate that he should expect a like facility on the part of his readers. Whatever I have to offer in comment upon Mr. Bradley's work is the result of a laborious effort to understand his doctrine of reality. If it should happen that every statement I may make can be refuted from some page of his work, I can only reply that on some other page it is at least *apparently* substantiated, and if every meaning I have read into his terms should turn out to be untrue to his thoughts, it merely proves that I am unlucky at toss-penny.

[2] All references are to the second edition.

real: not as appearance but as the actual content of reality —"the stuff of which the Universe is made" (p. 572).[1] It is appearance which enables reality to be real; for while reality, of course, is not appearance, it is still "nothing at all apart from appearances" (p. 551). The appearances serve to qualify the real as an adjective qualifies a noun. By themselves they are nothing; they are unreal, as the mere adjective by itself stands for no reality; but as predicated of reality they serve to identify it by adding to bare existence an essential content.

"If we take up anything considered real, no matter what it is, we find in it two aspects. There are always two things we can say about it; and if we cannot say both we have not got reality. There is a 'what' and a 'that,' an existence and a content, and the two are inseparable. That anything should be and yet should be nothing in particular, or that a quality should not qualify and give a character to anything, are obviously impossible. If we try to get the 'that' by itself, we do not get it, for either we have it qualified, or else we fail utterly. If we try to get the 'what' by itself, we find at once that it is not at all. It points to something beyond, and cannot exist by itself and as a bare adjective. Neither of these aspects, if you isolate it, can be taken as real, or indeed in that case is itself any longer. They are distinguishable only and are not divisible" (p. 162).

The mere existence, then, is by itself no more honestly real than the mere content. It is, perhaps, the essential determination of any reality, but *per se* it is nothing. Only when existence is qualified by a content can we have reality. But all those contents of experience by which we naturally qualify reality are self-contradictory, and hence are unreal appearances. This is the gist and burden of the book on "Appearance." And so, in order to get a *real* reality, we

[1] Appendix, note A.

must look for it in some absolute Real where the content of experience may exist without contradiction. This final and sole Reality, Mr. Bradley finds in his Absolute. "Reality," he says (p. 555),[1] "is above thought and above every partial aspect of being, but it includes them all. Each of these completes itself by uniting with the rest, and so makes the perfection of the whole. And this whole is experience, for anything other than experience is meaningless. Now anything that in any sense 'is,' qualifies the absolute reality and so is real. But on the other hand, because everything, to complete itself and to satisfy its own claims, must pass beyond itself, nothing in the end is real except the Absolute. Everything else is appearance; it is that the character of which goes beyond its own existence, is inconsistent with it and transcends it. And viewed intellectually appearance is error. But the remedy lies in supplementation by inclusion of that which is both outside and yet essential, and in the Absolute this remedy is perfected. There is no mere appearance or utter chance or absolute error, but all is relative. And the degree of reality is measured by the amount of supplementation required in each case, and by the extent to which the completion of anything entails its own destruction as such."

It is the lack of self-sufficiency and the need of supplementation in the relatively real that force upon us the conception of an Absolute. In immediate experience this need leads to an "ideal construction of reality"[2] which turns out to be our knowledge of the absolute Reality. But our knowledge is only a relative reconciliation of the contradictions of experience, and consequently is only relatively

[1] Appendix, § iv.

[2] As I understand them, the logical works of both Mr. Bradley and Mr. Bosanquet essentially consist of an elucidation of the principles of our ideal construction of reality. And this, it appears, is their important and valuable contribution to philosophic thought.

true. The Absolute, on the other hand, eliminates, or "transfuses," all contradictions, and it alone is final truth.[1]

Mr. Bradley has thus two distinct conceptions of reality. There is, first, the reality that we know within experience. This reality is ever relative and incomplete. It exists in all appearances, but in varying degrees. And it exists never to be realized as a *real* reality at all; its very incompleteness always points to some higher and fuller Reality upon which it depends for its character. It is a reality the one function of which is to serve as the subject of judgments, and in itself it must ever remain ideal.

Secondly, there is the reality of the Absolute. Here first we have a real which has more than ideal existence, and it is also the true ultimate subject to which all judgments refer. But it is no longer a merely logical reality, for it has become identical with the Whole, which in turn is the Fact of which all qualities are predicated. We may say, perhaps, that what as Fact, or Whole, or Universe, Mr. Bradley calls the Absolute, is in its logical aspect Reality. And this Reality is somehow or other one with those relative realities about which our predications are immediately made. It is, I should say, the fact of which they are the truth, and the difference between the two sorts of realities may be accounted for on the ground that fact and truth can never quite coalesce—"even absolute truth in the end seems to turn out erroneous" (p. 544).

It appears to be some such dualism of reality as the foregoing that leads Mr. Bradley to speak of a "positive relation of every appearance as an adjective to Reality, and the presence of Reality among its appearances in different de-

[1] The Absolute, however, as Mr. Bradley tells us, never can be truth in a proper sense of the word. For there is an "essential inconsistency of truth" which he states: "If there is any difference between *what it means* and *what it stands for*, then truth is clearly not realized. But if there is no such difference, then truth has ceased to exist."—Note, p. 544.

grees and with diverse values," as the "double truth found to be the centre of philosophy" (p. 551).

The most interesting and curious feature of this doctrine is its implied disjunction of the real and the existent. With Aristotle and with most of his successors these two concepts are co-extensive. And in a system of thought which identifies reality with the whole of the universe,[1] it is difficult to see how co-extension can be avoided. Nevertheless Mr. Bradley expressly discriminates them, and the reason is rather a subtle one. It arises from the existence of appearances. These, as we are told again and again, are not real. But this is true of them only *quâ* appearance; from an absolute standpoint the universe is nothing apart from its appearances; they are the stuff of which it is made. "All is appearance, and no appearance, or any combination of these, is the same as Reality"; but at the same time, "the Absolute *is* its appearances, it really is all and every one of them" (p. 486).

Now it is impossible to deny being of some sort to appearances *quâ* mere appearance. Otherwise they could not even maintain their self-contradictory and unreal character. In order to be described at all they must at least have existence as unrealities. But beside this they have also a real existence, though not in a sense in which they can properly be described as appearance; their real existence is only as "transmuted," absorbed and digested in the Absolute—the sense in which "appearance must belong to reality," and so "be concordant and other than it seems" (p. 140).

If this position may be interpreted, it means that the seeming which we define as appearance is a mere function,

[1] I do not recall any passage where Mr. Bradley states this identity; but he uses, with apparent indifference, the same expressions to qualify "Reality," the "Whole," and the "Absolute," and I cannot discern any distinction unless it be that indicated in the paragraph above. See especially chap. xxvii of *Appearance and Reality*.

attribute or predicate of that Reality for the sake of which the apparently real is ostracized. Now that real Reality must exist, but the extension of 'existence' cannot be confined to it because of the seeming existence, or existence-in-seeming, of appearances. Existence, therefore, is not heteronymous with reality; it is a category of all reality, but it is also "a form of the appearance of the Real" (p. 400). Elsewhere Mr. Bradley is inclined to deny altogether any existence to appearances as such, by reason of "the saving distinction that to have existence need not mean to exist" (p. 379). But the doctrine is sufficiently unintelligible without this added burden.

Briefly to recapitulate: Mr. Bradley recognizes a world of self-contradictory and unreal appearances which "represent, but are not, reality." In striving for knowledge we are forever grasping after a reality which shall transcend and eliminate these contradictory appearances, and this reality is the ideal subject of all our judgments and the ideal extension of whatever degree of reality we know. But because all the content and substance of our judgments must belong to the world of appearance, this reality must ever remain for us an ideal; or, if real at all, only relatively so. And since this is the case, and since the process is bound to be infinite, each transmutation of contradiction demanding in turn a higher transmutation, we are compelled to infer some final Reality within which a final transmutation is eternally achieved. And this is the Absolute. It alone is a real that exists. But —and here is the miracle!—its existence is in the very form and guise of appearance and contradiction, and hence it is that these, also, come to be.

12. Whatever may be the advantages of this theory, it is in danger of falling into that solipsism of the logician which is the chief pitfall of systems of thought that try to span the epistemologist's chasm by dint of dialectic. Even if all my

experience and all my knowledge be made a predicate of an ideal reality (which is yet but falsely real), so that I am forced to infer an absolute Reality within which mine, false and contradictory, must exist transfused and absorbed, the fact remains none the less painfully bare that for me all that seems true is a lie. Nor does it help one whit that I am told that my reality is bound to exist relatively and in a degree, for in the end all its existence is delusive appearance of the Absolute. Ever to exist as real Reality it must be transmuted in a manner and to a semblance of which I can have no faintest hint.[1] My knowledge is better than that of the solipsist, confined to his fleeting perceptions, only in that I know that my knowledge is wholly false, whereas he may hope, though he may never be sure, that his eyes see true.

This pitfall seems to be avoided by an appeal to experience. The self, Mr. Bradley argues, is merely an incident in the totality of known things, and consequently these things are *mine* only incidentally. The world I experience is really not *my* world at all—at least not with any warmth in the possessive. It is true that the world "appears in my experience, and so far as it exists there, *is* my state of mind," and even the Absolute, or God himself, is in a sense "*my* state"; but "my experience is not the whole world" (p. 260).

It is doubtless true that the self is a mere incident among the incidents that go to make up the world, but it does not follow that this fact releases the possessive from its implication of particularity. We may abstract all the elements that relate the world experienced to a self experiencing it, and still we have *a* world as residuum; and the article is just as

[1] Mr. Bradley never tires of assuring us that both the world of appearances and their final transmutation are inexplicable. In § v of the Appendix he explains that the "Why" and "How" are not to be required of him; that all he is called upon to show is that the unintelligibility of the Absolute is ultimate and is fact. The unintelligibility is likely to be conceded, but the question still remains whether such an Absolute is the fact.

much a particularization of this world as was the possessive. In other words, the world of which *my* experience is *the* experience can never be or mean anything other than what it is and means in the particular experience from which it is left as residuum after the 'self' and the 'mine' have been abstracted. It is still a solipsistic world, even if it happen to be the only world that actually is.

But we have it that the Absolute itself is in some sense "my state"; and this is certainly bound to carry us beyond any narrow self-inclusion. For it is definitively sure that the Absolute can never be, or be in, my states just as it is: that would deny the gist of the whole sermon, which only infers the existence of an Absolute because the self-contradictions of my states demand it as an 'other' to their incompleteness. It is plain that there is a world real in a different sense from that in which my world is real, and it must be the world of absolute Reality. But if it is never present to us except as other than it really is, what can we know of it beyond the bare fact of its existence? We know that it must be experience, Mr. Bradley answers;[1] and this is the strangest inconsequence in his whole theory. For to begin with, all the characteristics by which we identify experience, all its forms, qualities and contents, and even the categories of thought, are damned as false apparitions. The world that we really experience is made a shadow-land devoid of even the ghostly truths of Plato's cave. To be sure, all its color and sound and substance somehow exist in the Absolute, but only as so unrecognizably transformed that it is hardly fair to call them the same. And if this is true of every detail of experience, it is difficult to see how it can fail to be true of the whole; for assuredly experience taken as a whole is nothing apart from the details which constitute its content.

[1] Chapter xxvii.

There is, however, a second argument and a second appeal to experience by which Mr. Bradley seems to avert from his position the charge of solipsism. This is the theory of an immediate empirical knowledge of Reality, or, as he would choose, contact with it. "My way of contact with Reality is through a limited aperture. For I cannot get at it directly except through the felt 'this', and our immediate interchange and transfluence takes place through one small opening. Everything beyond, though not less real, is an expansion of the common essence which we feel burningly in this one focus. And so in the end, to know the Universe, we must fall back upon our personal experience and sensation" (p. 260).

The theory here set forth is developed most fully in the earlier chapters of *The Principles of Logic*. There we are also told that the reality which is the ultimate subject of all judgment is "the real which appears in perception" (p. 28). And what is meant is that it is that real which is immediately and empirically given, the bare and proximate fact. It is this which constitutes our point of contact with Reality.

There are ambiguities in the word 'appear' which ought to be indicated before we can judge of the value and validity of a contact with reality which is merely its appearance. We may speak of a thing as appearing to be what it really is not, and this is 'mere appearance'. Or we may mean that it appears as it really is, and this is the 'true appearance' of anything. Now when Mr. Bradley tells us that the real appears in perception, we must not understand him to refer to a true appearance. He is talking about a mere illusory appearance. "The real which appears in perception is not identical with the real just *as* it appears there" (p. 70). A distinction must be made between the real *as* it appears, or as it exists *for me*, and the real *which* appears, or as it exists *in itself*. The two can never coïncide. They

are not identical and they cannot even be alike. We are expressly assured on this point. "Reality we divined to be self-existent, substantial and individual: but, as it appears in presentation, it is none of these. The content throughout is infected with relativity, and adjectival in itself, the whole of its elements are also adjectival. Though given as fact, every part is given as existing by reference to something else. The mere perpetual disappearance in time of the given appearance is itself the negation of its claim to self-existence. And again, if we take it while it appears, its limits are never secured from the inroads of unreality. In space or in time its outside is made fact solely by relation to what is beyond" (p. 70).

The effort to attain Reality by means of immediate contact is self-convicted. All that it gives us is an appearance avowedly untrue to what it represents. On its "outside" alone may it somehow be real. But Reality is only the more hopelessly cut off from us.

Mr. Bradley's theory resolves itself into a final dualism. The real in perception and the reality in ideal construction are appearance. But as appearance they are adjectival and compel the assumption of a real Real and a real Reality of which they are the imperfect truth. The reality which is ostensibly the subject of judgment must be, I take it, that pseudo-reality which is real for me; but the reality which is the ultimate subject of all judgment, is rather that other Reality upon which my reality depends as an adjective, and which, as the Real, one might say barely kisses its ghostly counterpart in my perception. The theory differs from solipsism only in two respects. It affirms the existence of an Absolute within which our experience is in some inexplicable way transmuted; and it affirms that this experience must be so transmuted because all its content is known to be false and contradictory.

13. It is to be hoped that this brief examination of Mr. Bradley's doctrine has been not unprofitable. It has aimed to show the ambiguities and subtle evasions that are apt to result from a dialectical procedure. Such a procedure defines reality conceptually rather than in terms of things and qualities, and discredits fact for the sake of theoretical consistency. What we want is not a world of Platonic Ideas or of Spinozistic Eternal Verities, nor yet a Bradleyan Absolute, but rather a meaning in *our* reality, carnal and fleshly though it may be. And if our reality turn out to be founded in contradiction, it is the meaning of the contradictions that interests us, for it is in these that we live.

As for terminology, it appears to me that 'real' and 'unreal' are too valuable in the description of the empirical world to be subjected to the varied ambiguities of this dialectic. In the end all that is may be real, but ordinarily we do not so mean. Let us therefore continue to speak of significant being as the real; and as the unreal, of that which is merely suggestive. And for metaphysical Reality, let us return to the usage of early philosophy and speak of the Existent.

CHAPTER IV

EXPLANATION AND DESCRIPTION

14. FEW terms used in metaphysical and scientific discussions seem at first sight so thoroughly unambiguous as 'explanation.' When we ask for an explanation of anything there is seldom any halting self-questioning as to just what we mean or desire. We feel sure that we shall recognize the satisfaction of our demand when it comes. And this is due to the fact that explanation is really a psychical matter: it is a satisfaction of intellectual needs, and it is adequate whenever a particular need is met. Of course such needs vary, and consequently the meaning of the term must vary,—that is, its objective meaning; subjectively it is always a satisfaction, a state of mind, but objectively an explanation may be by classifications, identities, or causes, according to the form of the thought-need which is to be satisfied, by fact or representation, according to the kind of knowledge that is conveyed. What is immediately or intuitively known is self-explanatory; what is known only representatively is explained vicariously, the satisfaction being produced by something other than the object of actual interest. Again, we may wish to understand what a thing is in itself or we may wish to understand it through its causes. We thus have explanation on the principle of identity and on that of causality. But very often we mean by explanation, causal explanation only; for explanation on the principle of identity we are apt to use the term 'description.' The two terms are largely interchangeable; each has a

broader and a narrower meaning, but there is no clear demarcation. Perhaps we come nearest to usage if we say that explanation may indicate (1) self-explanation—and in this sense it has no connection with description; (2) descriptive explanation, which includes all definitive and classificatory descriptions; and (3) causal description. These uses will be considered in detail.

15. Whatever is self-explanatory is immediately known. In the chapter on the meaning of knowledge, both perceptual intuition and rational insight were defined as types of knowledge that carry their own satisfaction. They offer not only the feeling of certitude which is the characteristic mark of knowledge as distinguished from mere belief, but also that final quiescence of the demand to know which may be taken as the end and realization of adequate explanation. We may almost say that the only adequate explanation must be self-explanation, for it alone requires nothing beyond the given content of thought or perception to yield that satisfaction of certitude which is the meeting-point of the desire to know and its fulfillment. Possibly the complete satisfaction of this desire is rather to be described as the annihilation of it: our knowledge is perfect only when we cease to be curious. But this is viewing knowledge wholly in its psychical aspect; from a cosmical point of view, the moment of our most absolute certitude may be the moment of our greatest ignorance. Complete intelligibility, in other words, may mean not so much ultimate insight into truth, as want of perception of anything to be accounted for. And this truism of common experience holds within the whole range of a relative and finite knowledge of the world.

It will readily be seen that the attitude here taken makes psychical feeling the ultimate content of all our knowledge as well as of all objective experience. And this is inevitable so long as we understand 'content' in its literal meaning.

As has hitherto been asserted, abstract and analyze as we may, we cannot do away with the particularity of experience nor get non-experiential elements within it. Even if we suppose that our immediate knowledge of things implies a trans-conscious being of those things, we cannot say of this being that it is experienced, and we can say that our consciousness contains all that we know or can know of the things, including the implication of their trans-conscious being. We are always forced to describe our experience as organized in consciousness and composed only of conscious states—that is, if we use 'consciousness' in the broadest sense. For my own part, the word too fatally implies individuation and 'mental states' to seem valuable as designation of the *summum genus* of experience. 'Feeling' is the word that we instinctively use when we wish to describe elemental and unorganized experience; but it, too, is unfortunate in that it almost inevitably carries the notion of pure subjectivity. Possibly all elemental experience is purely subjective, but this is not *a priori* apparent. Perhaps the nearest that we come to the meaning required is in the word 'æsthetic.' Though, in English, narrowed to the one province of experience of the beautiful, it is a word in which the objective and subjective references are so indistinguishably interwrought that it seems to designate a somewhat which is neither objective nor subjective, but just the essential content of the experience. And this is as good description as we can give.

16. But if it is true that the *summum genus* of all knowledge and all experience is feeling, does not this necessitate pan-psychism? Supposing that we are finally forced to a logical construction of the world in accordance with the necessities of the forms of thought and are bound to analyze it into the psychical elements of our experience, have we any right to entertain a notion of possible other worlds than ours, or of chaoses, or of existences of any sort, unknown

and unknowable to us, yet not to be left out of account in our estimate of probabilities? If all we can grasp is psychical, can we think or mean anything that is not so?

Commonly this question is answered in the negative. We cannot even speak of a chaos, much less a world, without entering into that very realm of logic and psychology which our effort to apprehend trans-experiential being designs to avoid; and it is nonsense to treat what is literally unmentionable as if it were possible. This is the orthodox view.

But I have one point in answer. We do recognize the finiteness of the psychical self, and we do recognize that this self and all its body of knowledge is limited and circumscribed by a world which exceeds it. Whether our theory of the universe be based upon the psychical necessity of the perceptually given or upon the psychical necessity of logical constructions, we are bound to admit some form of transcension of our psychical nature, some existence other than ours or that of our thought. And so admitting, it is absurd to say that all the possibilities of that other existence are exhausted within the limits of our poor finite conception. It is doubtless true that we can only make use in our talking and our thinking of what stock of stuff experience furnishes us; but because we can only think of the universe as one, does not make it one,—indeed, 'it' may not be a universe at all,—and because our experience is contained within the universe, we are not compelled to infer that the whole must be experience. All arguments to such effect are but repetitions of Anselm's proof that God exists, and they are guilty of the same fallacy. It is reasonably certain that they carry conviction only to minds too much educated in philosophy.[1]

[1] If this position is tenable, it will be seen that the metaphysician should be on special guard with the term 'explanation.' He is in danger of confusing what can only be an explanation of human experience with the ontological explanation

The grounds for the assertion of any trans-experiential existences, or for any qualification of them, must lie within the *summum genus* of experience, and so be psychical. But at the same time an essential characteristic of all experience is recognition of its own limitation by somewhat other than itself. This, I take it, is empirical fact. The only question is, whether that which limits our experience is bound to be, as well as to be conceived, like it in kind.[1]

This question rests upon the relation of a content of knowledge to its meaning. What is the limit of the significance of symbols? In all experience that is self-explanatory, in all immediate knowledge, content and meaning are iden-

of the world. So long as we believe that human experience and human knowledge comprise but a merest islet in some universal sea of existences, it is hardly rational to attempt humanly to confine that sea. And it might not prove an avoidance of modesty if every metaphysical construction were advanced with some such reservation.

[1] The Hegelian dialectical attempt to overcome the constraint of the sense of limitation by calling it a "self-limitation" affords an excellent example of a curiously subtle and characteristically Hegelian fallacy. It seems true that self-consciousness is, as this doctrine teaches, a result of retroaction—"self thrown back upon self in consequence of contact with not-self," to put it in the orthodox vocabulary—and again, it appears certain that the general widening of human experience in the advance of knowledge is accurately if not very elegantly defined by the "constant synthesis of self and not-self into a higher unity." But when it comes to asserting that this process is the secret of the universe, the gist of reality and the soul of the Absolute, we have merely a huge hypostatization, a metaphor, for which there is no more warrant than for asserting that the universe is all apple jelly, or an appetite for hay, or any other combination of experiential elements. The process is nothing but an aspect of human experience capable of dialectical description. To seize upon it, crystallize it by dint of dialectic, and then find in it an exact mirror of all that is possible, is merely to abandon the world of actual experience for the sake of philosophizing about its ghost, forgetting that we are always in the midst of the process itself and that it is nothing but logical jargon apart from the flow and play of fact. Made absolute the process really has nothing to work upon, and is resolved into a frantically aimless activity or else into a sort of everlasting self-digestion; but in each case the "Absolute" that is served up is about as substantial as would be a cake whose recipe ignores flour, sugar and spices.

tical. But the reverse is true of representative knowledge. In such knowledge it is a peculiarity of the knowing state that it distinguishes itself and all its content from what it stands for. It even discriminates in what it stands for a meaning of the object as significant to the knowledge itself and a meaning of it as a merely existent something or other; that is, it discriminates a utility from the subject to which the utility belongs. Now the utility, of course, is nought if it cannot be realized in experience, but this is not so certainly true of the existence of the subject.

Perhaps the whole problem may be briefly stated thus: The human mind is framed to know those aspects of existence which are useful and so significant to the human organism. If this is so, do the types of existence that it can know include all possible types of existence? Because what we call experience exhausts all possible significance in the world for us, must the whole world be experience? Or may there not be in the universe, perhaps as its essential component, some sort of being that to the human mind is altogether unknowable because altogether dross to human need? Certainly this seems not impossible.

Knowledge distinguishes its own existence as a psychical fact from other existences. It even makes its psychical existence subordinate to other existences and so subordinates itself to what it knows. But this is only because it distinguishes in what it knows the content from the meaning and in the meaning the significance from the subject. Only the significance falls necessarily under the *ordo cognitionis;* the subject follows strictly the *ordo naturae.* Knowledge recognizes itself as a part of something, but the part ought not endeavor to swallow the whole. Of course this relation is puzzling, but it is only the puzzle of all representative knowledge and of the kind of explanation that such knowledge offers.

17. As ordinarily used the term 'explanation' means only vicarious explanation or description. This is the type of explanation that we make use of in the ideal extension of our knowledge, and it always means the accounting for one thing by something else adduced as its ground, cause or facsimile. If stress be laid upon its passive aspect, as mere description,—for 'explanation' seems to convey some hint of dynamogenesis in thought,—it is simply the designation of one thing in terms of another, an equating of the content of the description with the thing described. But in any case it is a substitution of one experience for another; or, perhaps, a filling out of the given with ideal experience—a sense in which every perception is a sort of explanation. Theoretically any object may be adequately explained; but a perfect explanation could be only by final insight into its real nature. Such insight is possible to an infinite intuition alone, and with this the explanation ceases to be description and becomes realization. Practically, however, description may meet all our needs; that is to say, we may acquire such extension of our given nucleus of knowledge of an object as will satisfy our curiosity about it. The mind does not commonly demand an intuition of the universe, but only the location of events amid attendant and similar events. It requires a feeling of orientation and trend for its contentment, and this may be attained either by the slow and laborious filling out of the given itself—that is, by the experience of a real series of events—or else by symbolic knowledge and descriptive representation.

Something has already been said concerning the nature of the symbol and the relation of content and meaning. In resuming this topic, a figure may render clearer certain necessary distinctions. We may call those images, or sensuous casts, gotten by immediate abstraction from an object, hieroglyphical symbols. In point of utility they

represent the lowest order of symbol and in point of intelligibility the highest. They are the most inutile because the most laborious psychically, and the most intelligible because nearest akin to the real object. The conceptual or class image, the imaginative symbol of the universal and generic, bears much the same relation to the sensuous cast that the hieratic character in writing bears to the hieroglyphic. It is an abstraction from an abstraction, a cast from a cast, with more or less elimination of detail; and it is distinguished most of all by the extension of its meaning to include more than one individual or fact. Finally we have the pure symbol the meaning of which is fixed by convention, and not by any internal necessity in the symbol itself. It may be called the alphabetical or algebraic symbol. Ultimately substitution of the experience that it stands for is the only exposition of the meaning of any symbol, but practically and for expediency's sake, we need substitute only in our conclusions. It will be seen that in all descriptive explanation the relation of the symbolic content to its meaning is uncertain and subject to considerable variation in intelligibility.

Naturally, the first question that occurs in this connection is, how can one thing represent another even in case the two are alike, since the difference which makes them two is preserved? But especially, how can we mean anything of which we are not conscious? We certainly are conscious of meanings apart from the words that express them. Must it not be so with all symbols, must not the meaning exist in consciousness in some sense with all intelligent use of symbols? This question is one of considerable importance, especially in any discussion of the validity of our thought-syntheses and ratiocinative processes. If in our thinking we are merely juggling with signs, or are in danger of this, we want to know it. But the question is for psychology rather

than for metaphysics to solve. What is of metaphysical, and practical, interest is that many facts of consciousness do mean something altogether outside of consciousness at the time. And this is too self-evident to be questioned.

Now we call these meanings of our conscious states either realities or possibilities; and thereby we mean real and possible existences, which we distinguish from one another by the degree of our certitude with regard to them. Of course we may err in our judgments, but that affects the truth of our ideal representation, not the fact for which it stands. Mr. Bradley tells us that all possibilities must be real possibilities,[1] and in one sense this is true, for there can be no gradations between the real and the impossible in actual existence. But it may be questioned whether the only meaning of 'possible' is not as description of some grade of knowledge or of belief rather than of fact. And in that case, what are the limits that we must set upon the possible?

What I understand Mr. Bradley to intend by his assertion that all possibilities must be real is not denial of possibility to whatever is non-existent, but assertion that every alternative which appeals to the mind as possible must be based upon some knowledge of reality, in short, that it must be conceivable. I am quite ready to agree to this, only it is necessary clearly to understand what is meant by conceivable. Certainly in this sense it cannot be equivalent to imageable. We can image a cat-headed goddess, but we do not therefore conceive Pasht to be possible; on the other hand, we can conceive of an extension of the spectrum to include more colors than the human eye can see or the mind image. Again, all of our universal notions are conceivable, yet none of them form real possibilities to any except the most visionary of Platonists. The conceivability which makes a real possibility is clearly not the conceiva-

[1] *The Principles of Logic*, book 1, chap. viii.

bility of the symbol in any of its three grades. It is of an altogether different sort, a conceivability in the meaning. I have already tried to distinguish in the meaning the existent as it is, the fact for which the symbol stands, and the existent as we mean it or conceive it to be. Neither of these can be in consciousness along with the symbol, the only office of which is to represent them in their absence. And it is only in the case of the existent as we mean it that we can talk of its possible existence, in concession to a possible difference between what we mean and what actually is, that is, to possible error in our judgments. It is of the meaning as we understand it, also, that we can say it must be conceivable in order to be possible.

To restate: A meaning may be understood (1) as an existent somewhat for which the symbolical content stands and of which it may or may not be true, and (2) as what we mean or conceive the symbol to stand for. It is only in the latter sense that we may speak of the existent as possible, and by possible we mean an existent that is really possible or conceivable. Conceivability, in turn, means nothing more than capacity—hypothetical or actual—for being elucidated in terms of the reality that we know.

But this statement must be modified; for we can distinguish and use in thought elements of reality which if we attempt to abstract them from their setting leave nothing behind, as for example, we can distinguish triangularity or redness from extension and can use these conceptions in thought, while at the same time we cannot abstract the extension without rendering them unimaginable. Consequently, we must include in possible existences many that are inconceivable in the ordinary sense of the word, since there is no reason for restricting our notion of the possible to the imageable. We know, indeed, that all representative knowledge is in some degree untrue to the object that it

stands for. All symbols are in last analysis algebraic, and we must not deny them meaning because there may be some whose exact value cannot in the nature of the case be known. We may, therefore, speak of a four-dimensional space as possible, though it is not imaginable,[1] or of the existence of other worlds or chaoses than such as could be reconstructed within our experience. And because the ground for these hypotheses lies within our experience is no reason for saying that the hypothetical existences must be like it in kind. Indeed if such conceptions as mere triangularity or mere redness are in any sense legitimate, we are even warranted in asserting the conceivability of facts that must be different in kind from experience, the possibility of wonder-lands where the grin may outlast the cat. Finally, it should not be overlooked that conceivability and possibility are by no means co-extensive terms; many things are conceivable which are felt to be, and since possibility is a modifier of knowledge only, are impossible. And again, conceivability is not the sole subjective mark of the possible, for in order to be possible an hypothesis must in some sense be credible, it must be a "living option."

18. From the foregoing discussion it is apparent that the symbolical content of an explanation need not be like the object explained. It must, however, be equivalent to this object, and the equivalence is a likeness of another sort—a likeness of function in thought. This likeness in function may be either as definitive or designative description or as causal description.

Designation is properly reproduction; that is, ultimately

[1] I am not ready to agree with Lotze's argument—*Metaphysics*, book 2, chap. ii—that four-dimensional space is impossible because space *is* dimension; for it appears to me that we can clearly discriminate voluminousness, or cubic dimension, from plane extension, and if so, we can certainly conceive them apart from one another; and if we can thus discriminate dimensions from the space compounded of them, we must allow the possibility of more than one kind of space.

it is qualification by resemblance. The analysis of symbols shows this, for symbols are intelligible in proportion as they reproduce the object symbolized. Of course a perfect reproduction never can be descriptive; the duality implied in 'likeness' disappears and we have instead identity. But this is true only in the objective world, and with some license. For there is a subjective sameness which never can imply identity, and this is the equivalence of objects in satisfying needs and fulfilling purposes, and it is called a sameness because of the persistence of function.

To put the matter more sharply, there are two kinds of equivalence—an equivalence of *quality*, and an equivalence of *equality*. The first is bound to lie within the content of the objects compared. It is a likeness in what things are. But when it is perfect, when there is absolute sameness, there is no longer any plurality of like things; there is simple identity or self-equivalence. On the other hand, the equivalence of equality is an equivalence in what things do, and it may refer either to objective or to thought efficiency.

Equivalence of quality is equivalence at all only by grace. As mere likeness it involves two factors each of which is qualitative. First, there is the sameness of content of the like things, and second, their plurality. But this plurality is not a quantitative plurality. It is the ultimate abstraction of mere difference in a given content, and while it may be described by an enumeration, it cannot be measured. In essence it is just as much a quality of the given as color or sound or form. On the other hand, the factor of sameness in quality may be quantitative—that is, there may be 'much' or 'little' of it, but never 'many' or 'few'. It is a quantity that cannot be measured by any unit and so cannot properly constitute an equivalence.

In order to define, a description need only reproduce. In order to explain in a fuller sense, it must find an equivalence

not between what the vicarious object and the explained object are, but between what they do. Such a description must be by some type of correlation; it must be locative, determining the position of its object in the series of interest, and it must designate this object in the language of function.

There are a number of modes in which we describe and explain phenomena, and they vary according to the elements in the phenomena which are emphasized and according to the principle upon which the explanation proceeds, whether identity or causality. Illustration and classification, for example, emphasize sameness of content or quality. Enumeration is a form of locative designation based upon difference of quality. Measurement rests also upon the principle of identity, but the sameness that it recognizes is a quantitative sameness, ultimately an equivalence in function or efficiency. The principle of causality, thus introduced, lies at the basis of all explanation by reference to necessary sequence, the necessity being nothing more than the efficiency of the hypothetical antecedents to cause the consequents. Besides efficient causation, we explain according to final or teleological cause, and according to the principle of sufficient reason. It is with these modes of explanation that we are now to be concerned.

CHAPTER V

THE PRINCIPLE OF IDENTITY

19. EXPLANATION on the principle of identity can yield a final satisfaction of the desire to know only in the self-identical. For such explanation must mean some degree of identification of that which is to be explained with what is already known, and in order to be wholly adequate, that is, in order entirely to eliminate curiosity, this identification must be absolute. Consequently no degree of resemblance or sameness that is less than absolute can give that incurious immediacy of knowledge which we require as the perfect explanation of the world. But so far as we can conceive, perfectly adequate knowledge of the world is possible only to a unitary intuition of it as wholly self-contained and self completed. To be sure, we may have knowledge adequate to all our practical needs and to all our wider human interests —in short, whatever knowledge we have any moral or intellectual right to require. But such knowledge, if it is to be knowledge of that which falls without the bourne of direct human experience, must be representative, and it can consist only of some sort of interpretation of the unseen into the world-language that we know. Really it must be poetry, though it need not therefore be untrue.

20. The whole motive that gives rise to metaphysical monisms appears to lie in an effort to obtain an intuition of the universe by an apotheosis of the principle of identity. It seems to be inferred that the only ultimately satisfying self-identity must needs be homogeneous, whether it be mat-

ter, spirit or Spinozistic substance; and so philosophers strive to find a subject in which each phase and quality of the universe must inhere.

Now the only reason that we have for postulating a metaphysical monism lies in the limitation of our power of apperceiving, or of grasping and holding, a unit of vast complication. We replace qualitative by quantitative extension, as our one means of even representing a universe. Our argument in every case rests upon human impotence. It is possible—and the matter will recur later—that all our metaphysical determinations and all the necessities of our knowledge in the end mean only our powerlessness; but if this is so, it surely ought to be taken into account in our estimates of nature, and surely we ought not draw conclusions where no imperative need exists.

The question then arises, are we compelled to conceive of a universal subject? It appears to me inevitable that we are compelled to conceive and represent the universe as unitary; but it does not follow that we are warranted in saying that it *is* unitary, and certainly it does not follow that we are forced to describe its unity as that of an homogeneous subject. Doubtless it is easier and more intelligible to do this, doubtless there is a real intellectual demand for a subject; but the subject explains nothing, and, so far as I can see, adds nothing to what is implied in 'unity,'—it is a unifying subject and nothing more. Let us take, for example, Spinoza's substance. Here is a subject in which all the facts and qualities of the world as it exists for us inhere as attributes. But it does not render these facts and qualities more intelligible on that account, or the world either more or less many-sided. Spinoza's world is precisely the same world as that described to us by Herbart's real qualities, and we have quite as much justification for postulating a subject for each of these qualities as for all of them together. The

only difference would be that, in assigning to reality many subjects, we should have complicated rather than simplified the universe. But it does not follow that the doctrine would be any less true to experience, for in experience there is unquestionably a multiplicity of diverse objects and it is these objects in all their diversity that constitute our reality.

The notion of subject appears to serve (1) as a concept by means of which we unify experience by uniting its diversities around a conceptual centre, and (2) as a limiting concept by means of which we bound the extension of our knowledge. In either case it is an expression of our impotence: as a unifying concept it denotes the narrowness of our apperceptive powers; as a limiting concept, our inability to extend our knowledge. No doubt the idea has some warrant in empirical experience. In experience of things we are inevitably led to it. But it is more than questionable if we are warranted in extending it to metaphysical entities, since even in the empirical world we are unable to give a satisfactory account of our meaning.

But granting the usefulness and validity of the subject as a logical equivalent of the existent or as a unifying and limiting concept, there is still to be asked what content of meaning the concept may have, for in none of these uses does it stand for more than a mode of thinking or a mere convenience of expression, representing no actual element of anything. Now the sorts of contents that we are most used to seeing made to serve for ontological subject or substance are such as atoms of matter, ether, consciousness. All of these represent, if they represent anything at all, abstractions from our immediate experience of multiple qualities; they are nothing more than one quality or group of qualities chosen from among many and hypostatized into real existences or subjects, in which all other qualities inhere as attributes. For practical purposes it may be expedient

so to hypostatize; it is another elimination in the algebra of thought. But metaphysically, there is no better reason for saying that the universe is atoms or ether, than for saying that it is olive green or a feeling of nausea; if 'olive green' ='vibrations of ether,' it does not make a particle of difference, apart from utility, which is chosen to explain the other or to be the subject. The same may be said of consciousness. I know that when we say that the universe is consciousness, we seem to be getting a multiplicity in our sameness; but if the sameness is made broad enough to include all differences, even opposites and contradictories (as of course it must be if it is the universe), it becomes too impalpable for thought. There is left not even a trace of the erasure; all that we have is a notion similar to Hegel's conception of being, so pervasively nude as to be no more than a shimmer of nothingness upon a background of naught. But if the sameness be ignored, as it is bound to be, since it is no longer a sameness of anything, then we have a mere multiplicity without any subject at all; or if consciousness is still taken as a subject, it can mean no more than an apperceptional unification of the manifold of the given.

There is, then, no good reason for a doctrine of metaphysical monism on the ground that it simplifies the ontological problem, for the subjects which monistic theories offer are always gotten by a process of abstraction from reality, the native heterogeneity of which is disregarded in a wholly arbitrary manner. And certainly unless this heterogeneity can legitimately be deduced from the subject and intelligibly accounted for, instead of being denied, "transfused," or ignored, as is commonly the case, there is neither rhyme nor reason in the monism.

But there is a sense in which we may be monists and still be rational, though it is not a monism based upon homo-

geneity of content that is allowed us. As I have said, we are forced to think of the universe as one, whether it is so or not, and if we further state that this one is a unitary organization, we have a theory that might be called monism which yet does not neglect differences. Organization implies nothing more than interrelation, and the relations may be between unlike as well as like things. We may even make them fixed and necessary relations, so that if one element of reality be taken away all must disappear; indeed, they must be necessary if we are to have a genuine monism. In this sense we can speak of any necessary element as an attribute or aspect of the whole, and of the whole as a subject; but by the subject we cannot mean anything more than the sum of the attributes. To put it very shortly, we can abstract only for the sake of knowing; it is only for knowledge that triangularity exists apart from extension. In the world of fact there are no abstractions, and no subjects and no attributes, for these are only terms of convenience in the description of facts.

But an objection may be raised even to the kind of monism here allowed. It springs from the fact which appears to lie at the base of the Hegelian dialectic, that we are unable to "rest in a whole" once grasped. That is to say, the very fact that we are forced to apprehend in units isolated by attention is felt as a limitation of the process of apprehension, and because we feel the limitation we are forced to infer somewhat which limits or defines the unity apprehended. This is the so-called self-transcendence of an experience ever demanding a satisfaction beyond itself. Of course we could not have a monistic universe if it had to be self-transcendent. An Absolute which synthesizes a unit and its limiting 'other' cannot itself be one in any of the senses that we ordinarily assign to unity. If it could, there would be an infinite series of units and 'others,' and so of Absolutes. But as an ob-

jection to monism the difficulty here involved can hardly be taken seriously. It could never arise except in a metaphysic based upon logic, and it can have significance only in those systems which affirm that the plan of the universe is to be found in the psychology of cognition.

21. Admitting the validity of the notion of a unitary organization that necessitates the character and place of each of the organized parts, there arises the inevitable query as to the meaning of unit and unitary. It is a recurrence of the problem of the subject in a new guise, for 'subject,' 'thing,' 'individual' and 'organism' are all conceptual descriptions of the sort of unity allowed. It is doubtful whether in last resort we are not forced to the tautology of describing the thing or subject as an organic unit in experience, the unit as a thing or subject. Possibly the unitary aspect may be accounted for, directly or indirectly, by the unity of apperception; for it may be that every subject, thing and organism is such only because of the self-limiting nature of our mode of apprehension, and that if we were able to intuit the whole complexus of the world as directly as we intuit simple complications of qualities, we should have qualities only and no subjects at all. But this is hard to believe. The unity of things and of organisms certainly does not seem to be created by our psychical limitations. We feel it to be characteristic of the things themselves, and it cannot be made to seem a mere restriction or convenience of our thought. If we have any natural predilections in the matter, it is in favor of the reality and worth of things rather than of mere qualitative diffusions of consciousness representing no unity at all.

A truer attempt to define the unity of the thing might be with reference to psychical and biological significances. In such a sense a thing would be a stimulus or centre of stimuli to be reacted to in a certain way. It would also have identity in space and time. But this alone could not differentiate

it; there would have to be in addition, a limitation by other qualities of the stimuli occasioning the peculiar reaction. Even this type of definition is unsatisfactory, for we can hardly escape the conviction that what constitutes a thing is to be found in some inner necessity of its construction—that it is a real thing, in short, and not a thing for knowledge alone.

While we are not prepared to say what a thing or a subject is, or what constitutes the unity of either, we may distinguish this unity from other sorts. Hegel discriminated *Einheit*, or unity proper, from *Anzahl*, sum or total number, and this distinction is of undoubted significance. We may question whether there is any real difference in kind between the organic and the aggregate unit so long as each is considered as a whole. We may affirm that the difference between a house and a pile of bricks is only a difference in the degree of complexity in the relations of the parts to the whole. But when we come to consider the nature of the parts and of their interrelations we find that there are differences of kind in their relations to the whole which affect our conception of its unity. Analysis of these differences shows that there are two ways of describing things numerically. They are (1) by enumeration of parts or qualities taken in distinction to one another, and (2) by measurement of identical parts or qualities in terms of some external unit.[1] Each of these modes of description may be employed in describ-

[1] The distinction drawn in this paragraph does not quite agree with the view expressed by Mr. Bosanquet in chap. iv of his *Logic*. Enumeration, although based upon some distinction of parts, is in his view an ideal repetition of a fixed unit; and hence, while anterior to measurement, is not to be sharply distinguished from it. In my opinion enumeration, as mere counting, is essentially an emphasis of differences without regard to the fixity of the unit. Mr. Bosanquet's contention that every enumeration and measurement is made with reference not only to a unit but also to a limit or whole, is undoubtedly true. It is such a whole that I have endeavored to distinguish from other unities as the 'organic unit.'

ing any given thing, and according to the mode employed, and so to the aspect emphasized, the thing will be considered an organic unity or a mere aggregate or quantity. Of course the aspect of the thing which is likely to be emphasized is determined by the character of the thing itself, and the mode of description has nothing to do with determining this character, except conceptually.

Mere distinction or difference in a content or subject is the ground for the unit of enumeration. When we observe difference, we have begun to form the abstraction represented by this unit. We recognize one thing and another, or one attribute and another; that is, two things or two attributes, or perhaps merely two somewhats undetermined except by their mutual distinction. Of course there must be a genus or whole within which the distinction is made, but this does not necessitate that the distinguished parts are the same in any other sense than as parts of this whole. The unit of enumeration is really the abstraction of bare difference. As unit it means 'the differing' and nothing more. And a numerical series, or a number, constructed from such units never describes an aggregate or sum, but always a whole made up of as many differences as there are units. The enumerative series, then, represents no quantity, but rather complexity. It stands for qualitative variety. At the same time any distinction implies some degree of sameness in the things distinguished. They at least belong to one experience, and are alike in each being a somewhat within it. And aside from this larger identity, there is implied a sameness, not of the units with one another, but of expanse of quality within the content of each one. This aspect we can consciously grasp only by avoiding it. When attention is devoted to an enumeration of differences, there is felt to be a certain voluminous homogeneity, a distinctionless continuum of some sort, within each different quality discrimi-

nated. To my mind, 'sameness' always carries some reference to this undistinguished volume of quality or character, this inner aspect of the unit, just as 'identity' describes it in its external aspect, or as a centre of reference. Now such a sameness of quality may be called quantity, but it is not measurable quantity, for it can never in any sense imply discreteness of content. It can only be that mere 'muchness' which gives the substantive feeling to any continuum in space or time. The moment measurement is attempted the feeling vanishes and the continuum becomes a succession. If the sameness still exists, it does so in spite of the discreteness that has been introduced and not by reason of it, and as pure voluminous quality it can be realized only by first abstracting the differences introduced by the measurement.

The unit which is concerned with quantitative descriptions is the unit of measurement. In itself it is always external to what it measures,[1] and it describes in terms of function or activity: one thing will do the same amount of work, occupy an equal space or time, or answer the same purpose as another. Measurement is thus always representative, and the kind of explanation that it gives is essentially illustrative. The equational form of expression is only the precise simile. The unit of measurement considered internally, or in respect to its content, is always qualitative. But it is also always ideal and generic with reference to that which is to be measured. It is ideal because it is external to the thing measured, and generic because it is the standard for the content of each repetition of the unit in the measurement. It is thus a qualitative basis for quantitative determinations.

[1] Of course a whole may be measured in terms of one of its parts, but when this is the case the part has really to be taken in abstraction from its essential relation to the whole, and so is external to it in the same way that any other unit of measurement would be external.

Now quantitative determinations may also be enumerations; but instead of being enumerations of differences, they are repetitions of identities. The same numerical series is employed as in the case of enumeration of differences, and in one sense the series may be said still to represent differences, but these differences are always in quantity—the number of repetitions of the one standard—never in varying quality. Quantity which is determined by measurement is altogether different from that mere continuum of self-same quality which was found to be implied in the unit of bare difference. That was purely homogeneous and indeterminate; but mensurable quantity always implies a difference in the sameness which is measured, determined by the number of reduplications of the unit of measurement. And even this unit, considered in itself and apart from any equation, represents a difference in identity, because it is generic.

22. The foregoing analysis has been necessary to enable us to understand clearly how far the principle of identity can serve us in explanation. It will readily be seen that the differences abstracted in the purely enumerative series can only be represented by a series varying with the original unit for unit, and that nothing would be gained by such a representation. It is, then, the unit of measurement and the repetitive or quantitative series to which we must look for descriptions and identifications in likeness; and it is only in this series that we can have profitable explanations. But in saying this it should be borne in mind that there are two types of measurement, and so of explanation based upon it. No matter what the unit may be which we choose as a standard, it must represent some quality to be repeated. When attention is centred upon the repetitions rather than the quality, we have quantitative explanations, or measurement in a strict sense. When, on the other hand, the quality is emphasized, we have explanation by means of universals and generic ideas.

Explanations of the world based upon either sort of measurement are subject to the same criticism as monism. Instead of one ultimate principle upon which the whole world is to be accounted for and by which all its variety is to be measured, there may be several, as in the case of Plato's Ideas we have many separate patterns of reality, and again in the case of the chemical elements a number of kinds of matter. But whether there be one pattern or many, the error is the same, and it consists in asserting that what is measured *is identical with* the standard of measurement instead of *is like* it, or *is equal to* it (like it in function or activity). This criticism has already appeared in the discussion of the subject and it need not be further elucidated. One may merely reiterate that to obtain strict identity it would be necessary to have a separate unit of measurement for each event in the universe, and even if such units be termed the subjects of the events, we have only complicated our pluralism. If, on the other hand, by measurements of events, we mean but to discover their likenesses, one with another, then we have identities for knowledge alone, and the complication of real events is as great as ever.

Another type of error is to be found in those systems which seek to explain the world by means of universals, and it lies in their confounding the generic unit with the organic unit or the whole. The whole of the genus, whether it be taken as conceptual or collective, is certainly not the same as the whole of the individual. Of all the great dialectic systems that of Plato alone appears to have emphasized this distinction. When he makes unity the supreme form of the Ideas, it is not the unity of a One of which they are parts, but a unity of each Idea which makes it a whole. The Ideas are the sole organic units and hence the sole realities. In a strict sense, they are not universals at all, but individuals. Doubtless they were derived by a process of generalization, but they were conceived as real existences.

Explanations which emphasize the quantitative aspect of measurement, as in physical science, are apt to neglect organic unity instead of confusing it with the qualitative content of the standard, as do the dialecticians. Doubtless all science proceeds upon a tacit assumption of the final organic or mechanical unity of the universe as a whole. Mill's necessary presupposition of the uniformity of nature is no less than this. But the concrete units of experience—the unities of things and individuals—are largely ignored, or, if they are treated at all, it is only in an effort to reduce them to some primal nebula of atoms, ether or energy. Even the assumption of the unity of the universe and of its final mechanical necessity is not altogether consistent with the effort to explain it upon a quantitative basis. It is only because such an effort is in its nature self-limited that it is content to stop with anything short of nebulous chaos.

23. By physical science energy or efficiency is taken as the measure, if not of every event in the universe, at least of all that can be explained by quantitative method. Now energy or efficiency is a qualitative content of a unit of measurement. In itself it is only an abstraction from specific manifestations of energy, and these manifestations are always in the form of some activity or achievement. Accordingly, whether we speak of an erg, an ampere or a horse-power, we always have reference to a capacity to perform definite work. We may define the energy as vibrations of ether, as mere causal efficiency, or yet as the sum of the mechanical determinants of events—as a generic term in the description of physical phenomena, representing their convertibility into work; but in any case it is known only in its manifestation in what is done.[1]

[1] It is difficult to say exactly what, apart from its particular applications, the concept of energy means for physical science. It is sometimes talked of as if it were a form of essence or substance akin to matter. It is even directly compared

The choosing of the unit is only a preliminary step. It is the business of the science to show that phenomena can be represented in terms of this unit—that energy can measure events—and in order to do this, it is necessary (1) to render the unit intelligible in terms of concrete experience, and (2) to show the likeness or equivalence of capacity in the various forms of phenomenal happenings.

The first task is relatively easy and is often achieved in the selection of the unit itself, as in the case of a candle-power or of a horse-power or of a foot-pound. A light of the particular intensity or the conditions of time, space and gravity for the particular mechanical effort may readily be produced so that we may come to realize in our immediate experience the meaning of the term. The same is true, if perhaps less obviously, of other units—the degree of heat, the ampere of electricity, and so on. Each derives its

to matter as a physical reality, differing from it only in being less "tangible" (Prof. Tait, *Recent Advances in Physical Science*). Prof. Mach terms it an "*unzerstörbare Etwas*," the *measure of which* is mechanical work (*Prinzip der Erhaltung des Energie*). But the definition of energy commonly given—as power of doing work (cf. Tait, *op. cit.*, p. 18; Prof. Mach also identifies *Energie* and *Arbeitsfähigkeit*)—would seem to give it an altogether different meaning, *i. e.*, as efficiency. Of course "capacity for work" is an abstraction from particular exemplifications of working activities; the implication of potentiality in such words as 'capacity,' 'power' and '*Fähigkeit*' cannot mean anything excepting its actual realization in work. But we can treat it as potential, or as something in and for itself, by conceiving it as cause of work which is to be manifested or has been manifested in some other than present time. But the concept of cause is considered by many physicists objectionable as involving metaphysical ambiguities (cf. Mach, *e. g.*, *op. cit.*, p. 200); and a late development of physical theory advances a doctrine of "Energetics" which maintains that energy, alone adequate to represent physical reality, is to be understood as a generic term in the description of physical phenomena representing their convertibility into work, and so mensurability in its units. Energy is thus a sum of mechanical determinants taken in their purely phenomenal aspect, and its persistence is to be understood as only an expression for the ceaselessness of physical activity, the endless flow of fact. In such sense the fitness and meaning of the term concerns the specialist alone.

meaning from immediate experience as surely if not as directly as the inch which is the length of a man's thumb-joint or the yard which represents his stride.

When we come to actual measurement and the formation of equations, we have reached what is most characteristic of scientific procedure and aim. Measurement is based upon the repetition of the given unit, and repetition is conditioned by time, and, in the physical world, by space. But in case of measurements in time—and so of all measurements of energy—it is impossible to form equations that represent quantity by mere repetition. Even if a given antecedent (taken as a unit) is always followed by the same consequent, we cannot mean by equating the two anything more than this uniformity of happening, and uniformity in itself is mere quality. In order to get a quantitative equation the antecedent must be shown to be convertible with its consequent, that is, the consequent must be so manipulated that it may produce a consequent just like its antecedent. When this is done we may assert that the two are quantitatively equal, and it is on this ground that the equality of cause and effect is asserted. The convertibility of different types of phenomena and the possibility of repeating one of the types in fixed unities of time and space enable quantitative equation. The repeated unit represents the measured phenomenon not only because it may directly or indirectly produce it, but also because it may be produced by it. But it should not be overlooked that the unit still only represents the measured phenomenon; it is not the phenomenon itself. Light may produce heat, and heat light, but they are not identical.[1]

[1] An equation of the forces or energies manifested in phenomena antecedent and consequent to one another is never an expression of an identity between them. The identity subsists between each phenomenon and the ideal unit which measures them. Just as in the case of the universal, this unit, in itself an abstrac-

In order, then, to get a theoretically adequate representation of the universe in terms of a physical unit, it is necessary to show that all the phenomena in the universe are convertible into that unit or repetitions of it—that is, that it may be made either antecedent or consequent of every phenomenon. It is plain enough that in the present state of science this is impossible. Psychical, biological and even chemical phenomena are not yet shown to be convertible with physical. But granting the hypothetical possibility of such convertibility, it is of interest to enquire just what the final equations could mean metaphysically. In order to see this we must return to the content of our unit. Suppose that it were with horse-powers that all the phenomena of the universe could be made convertible and that the whole universe could be shown to be equal to n horse-power, still we should not say that the universe would be the given exertion of n horses, engines or men under set conditions. That is palpably absurd. If we wish to refine, we might suppose that the total phenomena of the world could be expressed in candle-power, but we should not say that for that reason it must be light. If we make vibrations of ether the content of our unit, we have not bettered the case, but have only rendered it a little less intelligible, because of the difficulty of conceiving ether at all. Always in making one quality or

tion from reality, represents the common quality of the phenomena. The only difference between such a unit and the universal which forms the real middle term of a syllogism is that the unit of measurement may, when numerically determined, represent repetitions, or quantity, of the quality which constitutes the universal. Again, it should be noted that the equating of phenomena in terms of any particular unit is a matter of convenience rather than of necessity. Our choice of a representative quality is arbitrary except for reasons of utility. If some other quality were chosen we might very likely discover that the phenomena could not be equated at all. For example, a metrical scale based upon just observable differences in sense discriminations, while giving as true physical description, could hardly be interpreted in units of work.

combination of qualities within the universe the measure of the whole, the greater advantage for knowledge lies with the more concrete quality chosen.

But there is an alternative view. Let us grant that all physical phenomena could be shown to be equal to *n* ergs, and that the erg can be understood only in empirical experience, still we may maintain that what is actually represented by the empirical symbolization is an energy or efficiency which is the cause of all phenomena and is proven to be one and the same by their inter-convertibility. Such a view appears to be the logical outcome of the aims of quantitative science. It involves certain significant consequences.

First, we cannot affirm of this energy any quantitative extension. The only reason that we have for introducing quantitative relations is in order that we may form equations for the expression of differences. The likenesses implied in the quantitative form are sought for economy in conception, but they are based upon a discreteness in events which is at least a uniform difference. In our equation—the universe $= n$ ergs—the plurality of '*n* ergs' represents the difference of the phenomena equated and is significant only *within* the universe. The efficiency or energy which is the cause of the whole universe can only be represented: n ergs $= x$ efficiency. The efficiency is the whole cause; the universe is the whole effect. We can equate the wholes, but our equation can only mean that they are qualitatively equal, for the reason that we cannot show that they are convertible. Convertibility lies only between phenomena, and while it might be taken as evidence that they have like antecedents, it could not show that all phenomena have not a self-identical antecedent.

Secondly, we cannot deny to this ultimate efficiency qualitative difference except upon the further hypothesis that it is itself a quality. If we make it a quality it can only be in-

telligible in terms of our experience. It must, in other words, be an hypostatization of some quality or group of qualities within experience. Such hypostatization has already been discussed under the head of monism; for the present, it is only necessary to note that efficiency itself may represent a quality of immediate experience, and it is as such that it is apt to be understood. Of course we can assume an agnostic position, affirming a cause for the world without asserting or denying either quantitative or qualitative determinations of it.

If energy be taken in the third sense mentioned at the beginning of this section—viz., as a generic term in the description of phenomenal manifestations of force—it ceases to bear metaphysical implications. For in this sense the ideal standard—taken as content of the unit of measurement—always remains purely ideal. Whatever identities are expressed by equational descriptions are understood as symbolizing relations between phenomena, and not in any sense their inner nature or their relation to the world as a whole. The repetition of the unit is understood to be ideal and relative, and in strict sense a measure. The position ignores metaphysic, and so is most honestly scientific.

24. The universal concept is a kind of unit of measurement, but it is not concerned with the quantitative aspect of phenomena. The number of repetitions—the extension of the genus—does not affect its real significance. It is only in its content—the universal content in which all the members of the genus are alike—that its meaning lies. The sort of measurement that is involved is by comparison rather than by equation. We say that the members of a genus are alike in the possession of a common element, and this common element is the unit of comparison. But when we have spoken of a common element, we have already sown the seed of discordant thinking; for the common element is a same or

identical element, and since the universal does not derive its significance from its repetitions amid difference but from its intrinsic value, if the common element is the universal, it must be self-identical—unqualifiedly the same in all its incarnations. It is by such reasonings that we come to conceive the universal as the reality of that which it measures or expresses.

The law of identity is stated symbolically, A is A, A is the same as A, or A is identical with A, and these forms of expression are used indifferently. It is not my purpose to undertake what has already been performed by more competent hands [1]—a thorough study of the meanings of sameness and identity; but there are certain distinctions in these meanings essential to any criticism or analysis of explanation by means of universals, and these may be briefly outlined.

I. We speak of the sameness or identity of a thing with itself apart from any felt relations, temporal or other, to anything external. It is in this sense that the law of identity is said to express a mere tautology.

II. We speak of the sameness of two or more things or events different in time or space. It is in this sense that we can talk of repetitions of the same unit; but what we have is really a likeness or similarity of events differentiated only by time or space.

III. There is a self-sameness, or identity, in time which is not a mere likeness of repeated events, but rather the persistence of one thing as a self-identical continuum. This kind of sameness is distinguished from the second sort in that it never involves repetition or likeness of any description. It is distinguished from the first sort in that it does involve consciousness of time or duration. It is the sameness-with-itself of the thing which *seems* persistent, as op-

[1] In Prof. Fullerton's *Sameness and Identity* (University of Pennsylvania Publications, 1890).

posed to the self-identity of a mere quality apart from temporal relations or independent of any consciousness of them.

IV. Distinct from all these we have the sameness of a universal as the common element of many individuals. In themselves these may not even be like one another. It is only when we abstract from them entirely that we get what we call the identical element. But this element, *quâ* element, is not the same in the abstraction and in the particular: it is only in the latter that it is an element at all. When wholly abstracted it becomes truly generic, and not until then. And as generic it is altogether self-identical, as in sense I. Moreover it is out of space and out of time, and *as itself* it cannot be found in events which are in space or time (except as the content of an idea). Finally, it cannot be said to be the same as the corresponding element in the individual except in some sense of likeness—that is, as repeated amid differences.

We have, then, three kinds of self-identity. The first, the mere tautology expressed by the law of identity when taken in its narrowest meaning. The second is the self-sameness of a thing that persists in time. The third is that of the universal or generic concept considered solely with reference to its intension. In addition, two kinds of likeness, or sameness in repetition, have been noted. First, the likeness of two or more events differing only in time or space, and second, the likeness of the common element in the particular to the same content abstracted as the universal.

To gain a more accurate idea of the meaning and function of the universal, let us see how it is used in reasoning. When in two judgments we have, as we say, the same idea, which is to serve as a middle term, we have this same idea only in two different contexts or instances, hence as two like events. These two events—or in judgments, ideas—can never coalesce because they are two, and consequently the common

element can never be self-identical. It can only be the same in sense II., or like in the first sense of likeness. Yet so long as they remain two, so long as they are discrete, there can be no synthesis. The synthetic inference must be mediated by the universal, and it is of this process that we must inquire. The universal may be taken as an ideal content—the common element—abstracted from all the differences accompanying it in its individual incarnations. But in such case the universal is no longer an element at all; it is merely an ideal content to be compared with other ideal contents—the particular ideas—and it could be the same as these only in a sense of likeness (the second sense given). But here again there is a discreteness that cannot be overcome, for the abstracted element must still be conceived as a kind of individual.

The *modus operandi* of the universal in cognition must be conceived differently. The universal can never exist as itself in any particular. Neither can it ever be an idea, though we can have ideas of universals—the thought-content which represents the intension of the generic notion. All that the universal can legitimately be within experience is, psychically, as a sameness-in-seeming or as a mode of thought-reaction. Logically, it can only be an affirmation of likeness amid difference. But this likeness is never a self-identity. We may abstract from all differences of quality, but still we have plurality in space or time. We may abstract from space and time, but even then we have only an ideal same-with-itself which, so far as it is abstraction from actual events or ideas, can only be an idea of a universal. An infinite process of abstraction would never give us a universal in experience in any other sense than as a mode of thinking things.

25. Let us now resume the consideration of that type of thought which would explain the world wholly by a dialec-

tical use of universal ideas. I have already indicated one confusion into which such an effort is like to fall: a confusion of organic unity with the unity of the ideational content of the universal. It is now evident enough why this is fallacious. The universal is always attained by abstraction from some whole, or organic unit, and hence cannot be taken as an adequate representation of the complete reality of this whole. But there is another ambiguity that ought to be considered, arising from the confounding of the self-identity of the universal (really of the ideal representation of the universal) with the self-identity of that which persists as temporal reality (senses III. and IV. above given). This has appeared under another guise in the chapter upon "The Object of Knowledge," but it may be briefly re-stated from a new point of view.

In that chapter Mr. Bradley's doctrine of reality was carefully considered, but as it serves to illustrate the point in question its logical aspect may be again shortly sketched. In the earlier chapters of *The Principles of Logic* we learn that all ideas must be *mere* ideas, and, as used in judgments, all ideas are universals. An idea is "an adjective divorced, a parasite cut loose, a spirit without a body seeking rest in another, a mere possibility which by itself *is* nothing" (p. 8). Now the whole discussion of synthetic judgment and of inference, in this work, is concerned with showing us how we can have or make an "ideal construction of reality." Such construction, we find, must be mediated through universals. What is more, since all ideas are universals and the construction is ideal, it is inferred that universals form the truth of the reality. But this truth, except for the modicum of error which all truth as knowledge about a thing implies, is the same as the reality, and hence the reality also must be considered universal. The doctrine of degrees of truth and reality, advanced in *Appearance and Reality*, would mean,

then, the greater reality of the more universal, while the Absolute would be the absolutely universal.

It is easy to see that the gap between the real and the ideal, between the fact and its truth, is here bridged by a misuse of sameness. It is easy to see that the universal is made the real by an unwarranted incarnation of a truth which is only descriptive in its inception and development. But it is not so easy to see the motive which occasions the procedure. This motive appears to lie in a too ready identification of the self-sameness of the universal (taken as an ideal content) with that of the permanent reality. One may not rashly accuse so keen a thinker as Mr. Bradley of error in analysis, and, of course, the error may be misunderstanding, but it is an error natural enough to the logical point of view. For when we come to ask what we mean by the persistence of the same thing, in time, we can only represent it ideally by means of a universal; that is, by an abstraction from the continuum of fact. We then have a self-identity really not different from that of any other universal symbol, and it is even more natural than with any other, to treat such an abstraction as the reality it explains. Herein we err; for if we adhere firmly to empirical analysis, eschewing mere logic, we can hardly fail to see that self-identity in time has a definite psychical value of its own, and that experience of things as persistent things is the meaning, as opposed to the universal which is the content, of our representation.

Discussion of explanation on the principle of identity may be closed with a brief résumé of its functions and failings. To begin with, the only perfect explanation must be the self-identity of immediate intuition. This means that reality must eventually be its own significance, and the use of both 'explanation' and 'identity' in the connection is legitimate only when they are taken to represent conceptual limits. In their own right they are redundancies.

The real explanatory function of identity is in quantitative descriptions of events and in definition by means of universals. In these two uses it may be taken as the principle of the representation of repetition and sameness in experience. Again it may be understood as the principle of the description of reality conceived as the permanent or persistent. In all these uses it is essentially the principle of definition.

Where explanation in identities fails is in accounting for difference and change. The whole qualitative variation of experience, represented by the enumerative series, is ignored; or, where an attempt to account for it in terms of sameness is made, there always results the contradictory statement that one thing *is* something else, while all we have a right to assert is that one thing may be represented by another.

CHAPTER VI

THE PRINCIPLE OF CAUSALITY

26. THE principle of causality is the principle upon which we explain the succession of events in time. And this succession must always mean a real discreteness of the events. Causation means nothing when we say of an unchanging thing that it is the cause of its continued sameness; the cause of the persistence of the self-same must be sought outside the identical content. For this reason an attempt to explain away causality on the ground that we cannot find an identical element in the cause and its effect (I refer to the criticism in *Appearance and Reality*) is beside the point. It is merely showing that in a succession in time no identity is involved, which may be granted, with reservations, but it does not touch the problem of causality. For we do not require any cause why a thing should remain self-same, or, if we do, we seek for it outside the thing. What we wish to explain by causation is why a thing becomes different from what it is; change and difference, sequence of discrete events, is the fact that gives birth to the need for causal explanation.

But the succession of events which causes explain is not mere uniform sequence, as Hume and Mill would have had us believe. We may have a uniform sequence of moments in which a thing persists without asking for any cause of this persistence. We may have a sequence of positions in space of a moving body without asking for a cause within the series. Of a rolling stone we do not say that the cause

for its motion at some point *n* is the fact that it has just passed *m*, but we go back through the series to its dislodgment at a point *a* to find a 'real' cause (for 'common-sense'). It is for this reason that a physical causative series, in so far as it is mere repetition of an activity quantitatively the same, is strictly speaking not causation at all. In order to have a genuine causal series it is essential that there should be a succession of events qualitatively different. These events must be *necessarily* connected, and it is in the nature of this necessity, rather than in any uniformity, that the peculiar mark of causality is to be sought.

The fact that uniform sequence is not the whole essence of causation is nowhere better illustrated than in attempts to explain psychical facts by association of ideas. A train of associated ideas passes through the mind in due order and sequence, and we describe them as associated by similarity or contiguity of some type, but we do not consider this an adequate explanation.[1] We endeavor to account for the association either by an appeal to brain mechanism with its fixed and necessary interconnection, or by some law of psychical facilitation and redintegration, or, in common experience, by reference to the nature and necessity of the realities which the ideas represent.

Necessity is implied in the notion of regulative action of any sort, and it is this type of action which we term causal or efficient; but necessity is not restricted to activities. We may speak of a necessity that things should *be* what they are without meaning more than that, perforce, we find them so. But by causal necessity we mean the necessity that they should *act* as they do. This act-as-they-do is, to be sure, a matter of empirical observation, and in so far Hume's point of view is not unnatural. Yet it overlooks the element which makes causation reasonable—a cause for a thing a

[1] Cf. Wundt, *Human and Animal Psychology.*

reason for it. This element is the necessity of the connection of events, which we interpret as their efficiency. Efficiency, ascribed to the external world, means its ability to act upon us, just as our efficiency is our ability to act upon external events. We conceive the series of events to be necessary just because we conceive the world as a mechanism determined by an efficiency, if not like, at least represented by our own. It is only because the hard facts of the world resist our efforts to mould them to our wish and so negate our consciousness of self-sufficiency, substituting for a feeling of ability to do a feeling of impotence, that we come to conceive of necessity at all. And this necessity, which we feel as constraint of our activity, we conceive as a constraining force, stronger and more imperious than our own, but not intelligible except as like ours in kind. Not that we must think of it as dominated by intelligence; more frequently and perhaps with a more naïve truth we call it "brute" necessity, after all possibly the best designation we can have of a power that must always seem to us blind, impetuous, imperious, ruthlessly destroying the puny handiwork of man in building its own greater house of Fate.[1]

27.[2] Of all analyses of the meaning of causation I know of none more satisfactory than that of Aristotle. According to Zeller[3] the four causes which Aristotle distinguishes are resolvable into two: (1) the material cause and (2) the formal or conceptual, which includes in its meaning all that is conveyed by efficient and final causation. But it may be suggested that possibly this reduction is based upon a too

[1] Primitive animism represents this kind of personification, and doubtless it is reflected in Schopenhauer's "blind will"—blind because the author failed to perceive the implication of teleology in causal necessity.

[2] For the following analysis I am mainly indebted to the lectures of Prof. Wm. R. Newbold, of the University of Pennsylvania.

[3] *Die Philosophie der Griechen.*

free extension of the conception of the form (εἶδος) as an informing agency or moulding force. Doubtless when Aristotle speaks of a First Cause he does view the formal cause as pure efficiency working to an end; but in his dissection of fact and of the course of events in the given world—that is, in his more empirical mood—form, as matter, is really viewed as a product of last analysis. Form, as matter, is conceived as a constitutive element of reality, significant in the definition of being rather than in that of becoming. If we take into consideration that previous to Aristotle the main enquiry of Greek philosophy had been for elements rather than for causes,[1] that only in Plato's doctrine of the implasticity of matter and its native resistance to form have we the germ of the real meaning of efficiency (Plato viewed the Idea as being, not as a cause of becoming),[2] it seems likely that Aristotle first conceived cause as an element rather than as an agent, and that it is as elements that matter and form were conceived to constitute the physical thing. In such case, the four causes should be classified: Elements in the reality, or constitutive causes,—(1) formal, (2) material; elements in the process of becoming,—(1) moving, or efficient cause, (2) final, or teleological cause.

But this statement should be qualified. Aristotle, as Plato, ascribed to matter a certain efficacy of resistance, an implasticity which was taken to be the occasion of the imperfections of the world.[3] And again, the differentiation of being and becoming is not strictly true to Aristotle's teaching. He viewed all physical being as a process or product of becoming; and while only a combination of εἶδος and ὕλη could produce τὸ σύνολον, the concrete fact, yet since the latter was a result of development, or γένεσις, the elements

[1] Cf. Aristotle's *Metaphysics*, book 1.

[2] Zeller.

[3] A fact which in itself would modify Zeller's statement of the causes.

really were causes. The idea of teleological development is inwrought in the very essence of reality as so conceived, and it is in description of this development that causation, in the narrower sense of the term, appears. It is the efficiency of the εἶδος in imparting its form to the successive members of the causal series that gives rise to the concept of efficient or moving cause. It is the likeness of the final product to the εἶδος, conceived as the origination of the developmental process, that is accounted for by the final or teleological cause.

The Aristotelian analysis never contemplated an interpretation of causal sequence in terms of identity. It is true that the transmission of form through the developmental series was direct from member to member, and, though each member possessed a form of its own partially modifying the original εἶδος, still the efficiency transmitted belonged to this original and in so far there was likeness of the original cause throughout. In this sense Aristotle's conception of efficiency was very nearly equivalent to the modern physical conception, the difference lying in the fact that physics employs a quantitative rather than a qualitative description. Again, the final cause is an interpretation of a sameness of the original (formal) cause with its end or realization in the effect, but *quâ* cause it is really an accounting for the variation achieved. What Aristotle desired to explain is change in things themselves and the genesis of one thing from another, and this he attempted by ascribing the change in the object—which is ὕλη with reference to some εἶδος—to the ncarnation of the εἶδος in it.

28. In the chapter on identity the quantitative measurements of physical science were treated as explanation on that principle, although it was conceded that the meaning of the unit of measurement might be causal efficiency, that so energy might be conceived. It appears to me that the

hesitating desire on the part of the physicist to rid himself of the concept of cause altogether[1] arises from the very fact that in quantitative determinations it is superfluous. It does not affect results whether the unit represent cause or not, so long as it is but a term in the description of *un fait accompli*. Nevertheless the notion of efficiency is so thoroughly inwrought in the meaning of concepts such as energy, force, and work, that he is loth to abandon causality altogether; for to all the world and time out of mind *causa efficiens* has seemed something more than half the meaning of causation. But if physical energy really is a guise of causal efficiency, comparison of this with Aristotle's efficient cause will readily show that they narrowly correspond. To Aristotle the efficient cause was represented only by the actual working of the εἶδος along the causal series—its successive incarnations, if we may so speak—precisely as physical energy exists only in its manifestations and embodiments. Their difference lies in the method of estimating transmission through the series. Aristotle, having no knowledge of the convertibility of forces and their consequent quantitative determination, conceived transmission as qualitative likeness of cause and effect, and he estimated the purity of the effect —that is, its sole dependence upon a given cause—by the perfection of this likeness. It would perhaps be repetition to say that in the end this is exactly what the physicist does, and that the convertibility upon which the proof of his equations rests is only a final appeal to a judgment of sameness, just as his unit of measurement is an appeal to convenience. It is the ease with which these units can be reproduced under varying conditions which enables the equating of large bodies of phenomena in terms of them, and this gives rise to the essential difference of the modern view from that of Aristotle—that he recognized very many

[1] See note, page 70.

efficient εἰδη in the universe, whereas physics recognizes relatively few different kinds of energy.

Efficient causation does not exhaust the concept of cause. Even in its narrower usage, as descriptive of processes of change and becoming, Aristotle distinguished a teleological element. In the case of volitional action we discriminate the will to act from the ability to act, and it is the latter which we designate as efficiency. Possibly in the will itself we can make a further distinction of the volitional occasion and the volitional intention, of the choice as a fact which inaugurates action and the chosen object which is the aim of this action. In such case, it would be only the volitional intention which would correspond with Aristotle's final cause; the volitional occasion would be represented by that *causa occasionalis* which according to Sigwart,[1] alone constitutes the ground for the proposition that the cause precedes the effect. The distinguishing of such a cause from the final cause is of no value either when dealing with volitional actions or with any strictly teleological interpretation of change, such as Aristotle's, but doubtless it is of value in the case of sciences which wish to pare their concepts to minimal significance.

There can be no question that in the biological sciences the important causes are just those which demark the beginnings of a differentiation. The 'tendency to vary', of so much importance in evolutional theory, is nothing less than a general designation of such causes. Of course, since they are not convertible, for the evolutionary process cannot be reversed by experiment, they are incapable of quantitative determination; and consequently we have the relative inexactness of biological science, the explanations of which are necessarily based upon occasioning causes, as compared with the precision of physical explanations embodying

[1] *Logic*, § 73, ¶ 18.

mensurable efficiency. But it may be asked whether the physicist, also, does not employ occasioning cause in his descriptions. We answer: Never when these descriptions are in the form of equations; always when they represent historically specific fact. To explain, when the dictum *causa aequat effectum* is taken as expressing quantitative equivalence rather than similiformity, the equation is equally true, no matter which term represents the cause and which the effect. The reason for this is that both are abstractions *from* the specific events, the convertibility of which originally enabled the proposition, and they are abstractions *of* the quantitatively identical elements in the two events. The fact of convertibility gives no ground for an assertion of likeness nor, what is the same thing, of an equation between the conditions which distinguish the two events from one another, that is, their differences. It is these differentiating conditions that constitute, in each event, the *causa occasionalis* of its consequence. Either may be condition and either may be consequence, either may be the occasioning cause or its effect; but in this sense of cause the dictum *causa aequat effectum* is never true, and, as description of historical reality, there is never any indifference as to which is which —only one of the events can in the specific instance be the cause of the other. The very fact that the concept of energy or efficiency can be applied in the description of widely diverse natural phenomena, the fact of its extreme abstractness, is what enables its exact determination. But it is this fact also that renders it only a partial description of reality. It necessarily ignores the particular place and position of events in the phenomenal world, with reference to sequence, their direction, and this is just what makes them unique. Energy is an abstraction from, if perhaps also of, direction and position. The time and space conditions taken into account in physical calculations are essentially ideal; they

do not derive their significance from any particular historical context. And yet the particular context must embody every manifestation of energy, every event, and the ontological description of the event is not complete until all that makes it particular as well as the equation of energies involved is set forth.[1]

Physical description rests not only upon the assumption of the uniformity of nature, but also upon the correlative assumption of a universal tendency to vary.[2] This is shown clearly enough in Laplace's nebular hypothesis, and again in the Spencerian doctrine of evolution from homogeneity to heterogeneity. But it is also evidenced wherever an equational description represents abstraction from a given sequence of events. If real conditions were invariably taken as mere or chance occasions of their consequents, events ought always to be described *a posteriori*. But if they are conceived, as they are, to imply the necessary occasioning of the consequents, we are justified in expressing this fact in the form of scientific law, that is, as a law of nature. But we, then, no longer have a mere *causa occasionalis*, but an Aristotelian final cause in fullest sense,—we have this or we profess prophetic vision.

It is because the concept of energy does not comprehend the occasioning cause that the law of the conservation of energy cannot form the foundation of an adequate cosmology

[1] Energy is defined and measured by time, space and gravity; but as units of measurement are *per se* always ideal, the time and space considered are historically indifferent. Energy is also a general aspect of phenomena, since it persists through changes in them. These changes, particularized in time and space, are necessarily ignored in the generalization, but at the same time they centre our interest in cosmic history.

[2] A theory of cyclical repetitions of the history of the cosmos might do away with this second assumption, but it would have to postulate exact reduplication to the slightest detail, so that the bird-call from yonder green, my thought and action of this moment, must be repeated some cycle of aeons hence. An hypothesis so grotesque and pathetic and useless could not be taken seriously.

even of the mechanical type. Based as it is upon induction from an abstracted aspect of facts—their energies only,—it can give only a partial account of them. Really the aspect neglected is to us the most important one; for even if it be true that the amount of energy in the universe remains constant, this cannot explain why the universe is a universe, or why, or if, it develops in particular directions,—matters, I take it, that focalize our ontological interest. Again, it is not because energy is manifested in a particular fact, but because it is manifested in the particular way which makes the fact what it is—itself and no other—that we are most interested in it. Occasions for the utilization of energy are what meet practical need, and to account for or predict these occasions we do not rely upon the conservation of energy alone. If the events are such as come under human control, we appeal to human design and will; if they belong to the extra-human world, we appeal to the order of nature, taking some sort of mechanism for granted without attempting to explain it, although to satisfy metaphysical interests it is what we are most anxious to have expounded.[1]

29. It has been shown often enough that uniform sequence does not constitute an adequate description of causation; but in the discussion of *causa efficiens* and *causa occasionalis*, it has become evident that only the latter is essentially dependent upon sequence. An equation of efficiency takes no account of the order in which the equated terms are placed, and they may represent either sequence or concomitance in time. Indeed, Sigwart holds that they must be concomitant.[2]

[1] In this connection it may not be amiss to point out that if DesCartes' conception of volitional control over the direction of energy is false, it is not so because of any conflict with the law of the conservation of energy, nor due to any deduction from this law alone, but only to conflict with some fixed aspect of the universe otherwise predetermining mechanical directions.

[2] *Loc. cit.*

He illustrates by the case of a heavy body suspended by a thread: the cutting of the thread occasions the fall of the body, but the attraction of gravitation is the efficient cause of this fall and must be conceived as exerted simultaneously with it. The same view is expressed by Lotze in his doctrine that forces exist only in manifestation: attraction and repulsion is merely expression of the mutual relations of bodies.[1] If efficiency is to be so conceived, as a sort of sympathetic *rapport* between cause and effect, it is natural to enquire whether uniform concomitance may not be an adequate account of efficient causation.

The deficiency of uniform sequence as an account of causation lies in its failure to explain the necessity of the causal relation. Uniform sequence, as the succession of day and night, need not be causal at all; to become so, the antecedents must compulsorily determine the nature of the consequents. But there is a further necessity—that there be consequents from the antecedents, an outcome from given conditions; and this necessity may be ascribed to the efficient cause. It is the necessity that things should interact upon one another. Perhaps the nearest we come to a realization of it in ourselves is in mere volition to give expression to energy, without particular aim, resulting in a vague feeling of power; or, conversely, it is our feeling of helplessness in the presence of other powers, as when we "will the impossible" and experience only emotional reaction.[2]

But whether this account of efficient concomitance is true or not, it is certain that uniform concomitance is not *per se* conceived as efficient. The philosophies of both Spinoza and Leibnitz bear testimony to this fact, and in present-day thought the doctrine of psycho-physical parallelism in its more exact statements. What, then, are the distinguishing

[1] *Metaphysics*, book 2, chap. v.

[2] Cf. Sigwart, *Logic*, § 73, ¶ 11.

characteristics of efficient concomitance? The most important is that injection of necessity which seems to constitute for us the real meaning of efficiency and which we interpret in volitional feelings. But efficient concomitance is also characterized by the fact that it is always, in a sense, immanent causation. That is to say, in so far as it represents mutual response of forces, a *rapport* of the two terms, it is describing a single event within which lies its whole significance. It is an appeal to the inner nature of things, the relation that enables them to come into such relations with one another as to constitute new things. It is interpretation of the process of becoming in terms of becoming rather than of static identities. Doubtless this is not the original meaning of *causa immanens*. It is not strictly an inception of activity *within* a subject, but it is an activity *of* a subject—that is, a becoming or doing of something; and this, it appears to me, is all that *causa immanens* can mean. The transeunt cause is significant only with reference to the occasioning of an action; it has nothing whatever to do with the causes operating within the process; it is concerned only with the inauguration or aim of the evolution. The transeunt cause constitutes the external reason for the becoming of which the immanent cause constitutes the internal description. A recognition of this relation would obliterate that demand for a static identity within a causal process, the impossibility of which leads Mr. Bradley to reject causality altogether. The identity exists, but it is an identity of process and not of some transmitted element.

It should not be inferred that the various types of causation differentiated in analysis are separated in actual experience, or that they operate separately. Aristotle's was the sounder view when he conceived all as operative in any one process. Of course we can conceive of forces and efficiencies existing apart from any real change—that is, as latent

or potential; but we should remember that latency and potentiality express prediction rather than affirmation of reality. And if we accept the analysis of force which asserts its existence only in its exercise—an analysis which accords with experience—we cannot conceive any unoccasioned existence of efficiency.

Our interpretation of *causa immanens* need not be insisted upon. All that it aims to show is that efficiency is significant only in its exercise, and that this cannot be found except in a *rapport* of forces, which, because of their mutual relation, constitute an organic unity. Their mutual response might be conceived as a rapid oscillation of action and reaction, but more commonly is held to be an unbroken continuum of the involved forces, and so to imply their temporal concomitance rather than succession. But uniform concomitance is not in itself an adequate account of the interrelation of efficiencies. We may have coincidental concomitance as well as sequence; as, for example, we do not assign any mutual dependence to railroad trains running on the same schedule on parallel tracks; they form no organic unit, and so there is no necessity attaching to their parallelism. Necessity and immanency are the distinguishing characteristics of efficient concomitance. But it must be acknowledged that neither of these characteristics is satisfactory. Necessity in external events can only be interpreted by a projection of psychical feeling; positively, by the volitional feeling involved in the will to act, or in the feeling accompanying the effectual exercise of power,—negatively, by the feeling of ineffectual effort, of involuntary response to external stimuli, or of impotence and constraint in face of the blind operations of nature. Yet there seems to be no good reason why we should hypostatize human volitions in order to get necessary connections in change, or why, since this is so, we may not reject the notion of neces-

sity altogether. Nevertheless, we do make the hypostatization, and in my opinion, as a factor and consequence of larger inferences of like kind,—but these are reserved for later discussion. The unsatisfactoriness of the concept of immanency and of unity in change is even greater, for to it is attached yet more ambiguity than to unity in the thing. The difficulties are largely due to the static nature of definition. Even in the case of the persistent thing, remaining the self-same, this was seen to be the source of serious metaphysical errors (section 25), and in the case of changing and developing things the difficulties are multiplied. The problem may resolve into a question of utility, the subject of persistence and the subject of change may both be determined on a ground of mental economy rather than of necessity, or, indeed, necessity itself may turn out to be only a kind of utility—a utility which has evolved into a fixed characteristic of our thought, just as instinct is habit fixed by evolution. But in any case, it is not easy to avoid the conviction that in the nature of things themselves is to be found their true *ratio essendi* and their *ratio mutandi* as well. It is the merit of Aristotle's account of change that it reckons with the individuality of the process. The desire of matter for form, the desire of form for incarnation in matter, is perhaps as good a description as we have of the rationale of becoming.

30. In concluding the discussion of causality, let us briefly review the analysis presented. To begin with, the concept of cause was taken to be always a principle of explanation of change. The Aristotelian account of the process of becoming was chosen as the typical true account, and the Aristotelian final and efficient causes were assumed to represent the essential subdivisions of causality. It was noted, however, that in strict accord with legitimate usage, Aristotle's final cause must be yet further analyzed into (1) the essen-

tial condition or direction-giving event, corresponding to *causa occasionalis*, and (2) the aim or design, the teleological cause in strict sense. Efficiency was interpreted as the simultaneous action of cause and effect; and it was therefore maintained that *causa efficiens* is essentially an immanent cause, and in strictest sense the only possible *causa immanens*. On the other hand, *causa transiens* was identified with the occasioning or with the final cause—the cause that marks the inauguration of a process of becoming. But none of these types of causation were taken to be self-subsistent. Every process of change involves an exercise of efficiency, and also an occasion and a consummation. The efficient cause is description of the first, the final cause, which might be taken as the definition of the boundaries of the conceptual unity of the process, expresses the second and the third.

There remains the question of the conceivability of causation; for some have doubted its reality upon this score. The difficulty appears to spring wholly from a notion of transmission of form. But 'transmission,' as Lotze shows, is only a figure of speech and ought not to be conceived as describing any esoteric reality. The fact that is to be described is the unquestionable fact of change in phenomena. Change is not only perfectly conceivable, aye, imageable, but it may be doubted whether a thing *is* anything at all apart from what it *does*. I do not mean that it is wholly activity. Such an abstraction is quite as false as the commoner one which asserts that it is wholly static quality. The fault lies in that unfortunate characteristic of universal ideas, hitherto mentioned, which tends to give a static rather than a dynamic content to definition. We may say, indeed, that the principle of identity, upon which definitions are constructed, is less true of reality than that of causality—for descriptions based upon the latter are forced to take cognizance of the verbs of the language. If the logic of definition

were to be revised, it might be found that in verbal forms lies a ready instrument for describing experiences of becoming and efficiency and of the realization of design, all quite as real and intelligible as any experience of identical qualities which our adjectives and nouns describe.

CHAPTER VII

THE PRINCIPLE OF SUFFICIENT REASON

31. In the chapters on identity and causality the two fundamental principles upon which any explanation must be based have been discussed. Alone on the principle of identity, it has been said, is to be conceived possible that annihilation of curiosity and seeking which must constitute the final satisfaction and certitude of knowledge. Ultimately adequate knowledge must be immediate intuition of reality as it is. But such knowledge is possible in actual experience to a very limited extent and only in case of the lesser realities of life,—realities of physical and physiological importance, no doubt, but not such as can satisfy intellectual needs nor aid in the larger interests of human life. For the more potent knowledge we are forced to rely upon representations and symbols and to explain—account for the extra-experiential past or predict the future—by means of vicarious thought. It is in this type of explanation that all that we call rational knowing is included, and it is for such knowing that causes and ideal identities furnish material. On the principle of identity we answer the question, What is reality? That is to say, we define reality; and if we understand thoroughly what this means, we recognize in our definition an assertion of the likeness of something not immediately known to something of whose nature immediate experience has fully satisfied us. In other words, all representative knowledge of the *esse* of a thing is immediate knowledge of what the thing is like, so that every answer to the ontologi-

cal question is a simile. But definition can never serve us except as a means of identifying events when we find them. It can never tell us why a thing is what it is. The ontological inquiry must always be supplemented by a search after causes; indeed, we might say that it resolves itself into a search after causes. Why is our reality what it is? is the second question which we have to answer, and we always try to anwer it by showing a course of development whereby something which was has become that which is. The principle of causality aims to correct a defect and supply a deficiency in explanations by identity. This deficiency lies in the fact that an account by identity is always an account of something static and self-same. The abstract, fixed nature of definitive symbols necessitates this, and so renders every definition not only a simile but a simile that cannot be true to the fact. For the fact of the world is as much fact of becoming as of being; not more, not less, since one cannot be found without the other. Causal description at its best is a full description of a process of becoming. It is a series of definitions, perhaps, but the qualities defined are localized in time and space, and furthermore causal definition is distinguished from definition by identity in its reference to determinism and necessity. Determinism, interpreted in the only language that enables us to understand its meaning, the language of human volitional activity, is the obverse expression for the world's activity,—its volition or automatism, as you choose. In this final sense causal explanation is found to be based upon identity, for it refers to an immediate experience (of volition) which is taken to be the essential nature of the dumb activity of things. But causal explanation also tells us that a thing *is* what it *becomes*, because it never is anything at all apart from becoming; and in this it gives a truer, because more particular, explanation than can be one which asserts that a thing *is* what it *is like*. Causal

description avoids that error of universality which besets mere definition (except in case pure efficiency, which is a universal, be counted a whole cause), and it does this by particularizing in time and space. Yet particularization alone does not constitute the whole of what we mean by rendering intelligible. Definitive identification is quite as essential to understanding as orientation of the event. Hence it is that both principles are involved in the *sufficient reason* for anything.

The principle of the sufficient reason was formulated by Leibnitz. In the well-known passage in the *Theodicée*[2] he counts the "determining" reason and the principle of contradiction the two great principles of reasoning. The principle of contradiction is, of course, only the negative expression of the principle of identity; but the determining reason is not, in Leibnitz's mind, the same as causality. It is, he says, the principle "that nothing happens without a cause, or at least a determining reason, that is something which may serve to render a reason *a priori* why something is existent rather than non-existent, and why it exists as it is rather than otherwise"; wherein it is plain that the reason is distinguished from the cause. In definitions of the sufficient reason elsewhere[1] and in the use of this principle to prove the existence of God, Leibnitz shows that it was formulated in response to an intellectual need for a supplementation of the concept of cause. In later German thought the distinction between *Grund* and *Ursache* points the same need. With Hegel *Grund* is a category of the essence of a thing—its *raison d'être* as ultimately present in the thing itself; it might include causes, but it is more than these, for the causes are always particular, whereas the ground expresses universal relations and so relations of being. The

[1] Part 1, sec. 44.

[2] *Principes de la Nature et de la Grâce*, sec. 7.

ground, as also the sufficient reason, always relates to some answer to the problem of ontology; that answer must tell us not only what the reality is, but also what it does or becomes, and consequently it must include both the definition and the causes of that for which it accounts. Again, the sufficient reason must tell what reality means for us, and so must satisfy the demand for teleological reason,—but for the thorough understanding of this it is necessary to ask after the precise meaning of the ontological query.

32. The great question for philosophy is the *why* of the world. And to it there is but one form of answer—*because*. The sufficiency of this answer depends entirely upon our need. To the child the mere word, the form of an answer, may suffice. "It is so because it is." To the savage an animistic interpretation is competent satisfaction. He understands nature by finding in it the likeness of his own soul: the tree tosses its branches because it is in pain, the wind is the wrath of a god. But the civilized analyst is not content with anthropomorphic and psychomorphic analogies. He seeks for a reason within the inmost nature of reality itself, and in order to get this reason he strives to find, first, what reality is and what its essence. Thus is born the ontological query, which even Aristotle calls the "old" query.

But the question, What is reality? is not in itself a final one. It is asked only that we may answer the more intimate question, Why is our reality what it is? or, Why do things act as they do? We want to get hold of the essence or being of reality just in order that we may understand the why of the world that is given us. We want a reason for this world, its 'because'. Existence means nothing more to us than the ground for our experience and the ground for our knowledge of what is beyond the content of the given. It is only as furnishing grounds and reasons—answers to our

'whys'—that an ontological theory seems satisfying to us, and it is only for the sake of these that we require such a theory. In a way the problem of ontology is a false problem. It cannot be answered except by metaphors. The one reality the *esse* of which we can and do know is the reality that is immediately ours. But our reality is finite and bounded by our impotence. It compels us to infer reality beyond it. And it is because of this and because even over the real that is known to us we have no unconstrained control, that we ask the why of it and try to find an answer in the essence of that which is beyond.

Such is the nature of the question: what of the answer? It appears to me certain that the only finally satisfactory answer must be one which interprets being in terms of meaning; that is, the sufficient reason for anything must be found in its purpose and intention. It was such a reference to purpose that forced Leibnitz to find in God the sufficient reason for everything, and in the need for the reason a proof of His existence. Again, it is such a reference that gives the ontological answer its seeming satisfactoriness, for, taken as a whole, the universe cannot mean anything more than it is. Finally, it is the lack of such reference that forms the ground of our repugnance to the conception of chaos and of our instinctive feeling of the inadequacy of a merely mechanical view of the world.

If the universe means anything for itself, it must *be* that meaning. But we can never know what it really is, and in any event its meaning for itself and its being is of interest to us only in so far as it reveals its meaning for us. Its meaning for us is what we are vitally interested in. We want to know what it is going to do with us and what is the part we play in it. The problem of meaning is the problem of teleology, and every ontology is only propaedeutic to its solution. Our real ontological interest lies in discovering

whether the world is blind or intelligent. If the answer be given that it is intelligent, we are apt to take this as a final satisfaction of our philosophical inquiry, for the reason that intelligence implies purpose or plan of some sort. On the other hand, if we are told that the reality of the world is senseless force, content or not, we are compelled to abandon any teleological inquiry as useless; and then we come back to the brute fact and try to create a meaning within the barren domain that is left to us. It is an emaciated, feeble purpose that we find, not the vital meaning which is the full hunt of a hale teleology, but even those sciences which rest most narrowly upon the assumption of blind mechanism cannot wholly escape it.

33. A reason for any particular thing may lie in the nature of the thing itself or in its causes. For example, if we ask in regard to a piece of metal, why is it lustrous? we are likely to be answered, because lustre is characteristic of all metals. And again, if we ask concerning a rounded pebble, why is it smooth? the answer will be that the action of waves has caused its smoothness. And such reasons may satisfy us; that is, they may seem to us sufficient reasons for the phenomena. But if they do so, it is only for one of two causes: either because our need and our curiosity is limited, or else because a further reason is implied, though not expressed, in the answer. This further reason, with respect to the particular fact asked about and the particular answer given, is always an assumption. In the case of the metal it is the assumption that a peculiar lustre is a necessary characteristic of all metals. In the case of the pebble it is the assumption that it is the natural action of waves to smooth pebbles. These may be inductions from actual experience; we may have observed such facts; but with reference to the new fact in hand, for which the induction is made to account, the likeness in nature is purely assumed. To

be sure where the quality asked about is directly given and is contained in the definition of the thing, as the lustre of the metal, we may be said to have a new instance of the general truth which is given as a reason; and in consequence we are apt to say that such a reason is no real reason, meaning by real reason a cause. But in fact the assumed generality is the reason, and this is true whether the universal taken be definitive or causal. Let us take another example. We ask the why of a certain perfume, and then, perceiving a vase of roses, answer ourselves, because of the roses. Now it may be that, questioned, we should say that the roses caused the perfume, but we are quite as likely to say that a sweet odor is characteristic of roses. Yet the characteristic is not contained in the definition of rose, for not all roses are odorous. Our real reason is again a general truth which is inferred from the greater or less constancy of the like characteristic in our previous experience; but for the new instance, until we have experimentally tested it and so determined that the perfume is indeed sprung from the vase of roses, there is an assumption and it lies in the assumption of uniformity. All sufficient reasons implicitly refer, at the least, to the stability and uniformity of nature—itself, as Mill says, an inductive inference and at the same time an assumption underlying all other inferences. But whether this is the sole reference of the sufficient reason remains yet to be seen.

In order that it may represent even minimum adequacy of reason, the conception of the uniformity of nature must be modified in two ways. First, it must be necessary uniformity and not mere uniformity. It must represent some sort of determinism. This determinism may be only subjective, only the necessity which given antecedents exert over their consequents for thought, but it is essential to any generalization or any induction from the facts, and necessary to what we call a law or principle of anything. In itself and apart

from necessity, uniformity is not inconsistent with chaos; if there is no inner need of the facts, that they should be what they are, there is no reason why a perfectly uniform world might not be conceived chaotic.[1] This is plain enough when we conceive nebular homogeneity; for this, while representing perfect qualitative uniformity, might be pure chaos, and must be chaos unless ordered and governed by natural law. But in the conception of such law it is impossible to escape the jussive necessity which originally pertained to the notion of legal order. We have a natural repugnance to the notion of chaos, doubtless due to the fact that it seems to us only an expression of whim and caprice (honest prerogatives only of children and coquettes). In the reasonless rule of a Caliban we have uniformity,—

> "Am strong myself compared to yonder crabs
> That march now from the mountain to the sea;
> Let twenty pass, and stone the twenty-first,
> Loving not, hating not, just choosing so,"—

but it is a uniformity that allows of no generalization and no expression of law and order. It is motiveless and meaningless. It may possibly be the ultimate truth of nature, but if so all our knowledge is false and all our science vain.

Necessary uniformity is, then, the real meaning of the assumption of the uniformity of nature. But necessity is only to be understood in terms of volition. Mill appears to recognize this in his discussion, for he speaks of the essential laws of nature as the fewest volitions that can be assumed to account for observed facts.[2] Of course it may be held that the will assumed is "blind will," though whether the conception of volition can legitimately be used apart from some notion of a willed object or end—that is, an intelligent

[1] See Lotze's *Metaphysics*, Introduction.

[2] *Essentials of Logic*, vol. i, p. 383.

will—may well be an open question. But granting this possible, it is not yet evident that any determinism can quite do away with the notion of such an end.

In the preceding chapter (section 28), I pointed out that the principle of the uniformity of nature is correlative with the tendency to vary.[1] And this tendency is the second modification necessary to the rationality of that principle. The two hypotheses are sometimes expressed together as 'uniform variation.' But 'tendency to vary' means more than 'uniform variation'; it means a tendency to vary in some particular direction. It means that the differentiation of the consequent is necessitated by its antecedent, and so that the succession of events is thoroughly articulate. And such articulation demands necessarily some *terminus ad quem* that must be the normal goal of the variation (of course this need not be a static end). The conception of the necessity of change is just as essential to science as that of the necessity of uniformity which it supplements. It is expressed most simply in physics as the tendency of force to exert itself along the line of least resistance,[2] and again and more fully in biological science in the doctrine of evolution. It appears, then, that in any case a certain modicum of teleology is retained. An end of all physical evolution is

[1] The phrase, "tendency to vary," is, from a standpoint of blind determinism, unfortunate. For 'tendency' certainly implies option, or at least a possible failure to follow the tendency, and this is fatal to mere mechanism. But what is ordinarily meant by the tendency to vary is just the fact of change in the world. The word 'tendency' is merely an expression for the latitude which the ignorance of the observer compels him to allow. If he is a thorough mechanist he cannot believe in its objective existence.

[2] But it is difficult to see how the concept of "path of least resistance" can mean anything real, because of its absolute universality. There is never any option, and consequently nothing from which it can be discriminated. If a force should pursue a path seemingly not the one offering least resistance, we should not take that seeming to be the fact, but would judge ourselves to have been in error. No absolutely universal phenomenon can discriminate anything.

assumed, definite and foreordained, which with sufficient prescience could be known in all its detail. But such prescience would have to be representation, and it is on denial of representative knowledge in connection with physical evolution, not on denial of its working toward some end, that the case of mechanical determinism, as cosmology, ultimately rests.

34. It appears, then, that even in minimal signification, in the natural world, any sufficient reason for phenomena rests upon cosmological presuppositions and implicitly involves some sort of *Weltanschauung* as the basis of its rationality. In the physical sciences these presuppositions are, to use Mill's expression, represented by the fewest possible volitions that can be conceived to account for observed facts. The position of mechanical determinism may, indeed, be described as an effort to solve the problem of teleology upon the law of parsimony. It takes the fewest possible assumptions to constitute the sufficient reason. These assumptions are: (1) the uniformity of nature, or the uniform variation of phenomena; (2) the necessity of the course of nature,—determinism rather than chaos; (3) a tendency to vary, and to vary in a determined direction,—cosmical evolution. These assumptions are rendered intelligible to us by the analogy of human volitional activity, but there is still question whether the volition shall be assumed to be rational or blind. This question rests entirely upon evidence, it must be answered by interpretation of empirical facts; but it is essentially *the* problem of metaphysics and only *per accidens* a concern of science.

To render this clear, let us briefly review. A thing may be accounted for, it has been said, either on the principle of identity or on that of causality, but in either case the sufficient reason which makes such explanation seem valid is an assumed universal under which the particular fact to be ac-

counted for is subsumed. This universal is always some character of the nature of reality; and thus we are confronted with the problem of ontology the very task of which is to tell us what the nature of reality is. But when we come to analyze the meaning of the *esse* of reality, we find it to be *significare:* the existence of anything for us is its meaning for us: that is what constitutes its rationality and makes it a ground or reason for what we wish to explain. Meaning, however, is fully significant only in the sense of purpose and design, that is, as volition. Eventually this volition must be conceived to be intelligent if the reason shall be wholly adequate; for if human will to act is man's only measure of the intelligibility of world-activities, so human reason is the only measure of the intelligibility of world-rationality, and purpose similar to human purpose is for us the only possible sufficient reason. The ontological problem thus resolves itself into the teleological, and it is only because of their implied teleology that the great metaphysical ontologies have seemed to be satisfactory solutions of the philosopher's quest.

But there is another sense in which the ontological problem is properly propaedeutic to the teleological, and this is where it is taken as the problem of science. For ontology is the definition and description of reality, and it is the whole business of the natural sciences to describe, so far as may be, what the world is, that is, to record and chart all phenomenal facts. Such description must always be on the principles of identity and causality, and with the assumption of a determining reason. The problem of science so considered cannot possibly conflict with the metaphysical problem of teleology. The object of the latter is interpretation of scientific facts in terms of meaning, and that can only be by an elucidation of the sufficient reason involved in the cosmological assumptions which form the basis of science.

It is manifest that between the description of facts and the interpretation of them through these assumptions there can be no antagonism. But historically there has existed opposition between mechanical and other types of cosmology wherein the former has seemed to represent the scientific as opposed to metaphysical views. Really the whole field of difference is metaphysical, and the conflict has occurred, not in connection with the description of facts, but in interpretations of the teleological import of nature. In general the questions at issue have been as to what constitutes the sufficient reason for reality, and whether a sufficient reason in the sense of intelligent purpose really exists or not.

35. Most of the arguments for the intelligence of the *motif* of the universe are analogies drawn from the rational and volitional psychology of the human mind. It is not necessary to enter into a discussion of them here, but it may be remarked *en passant* that a demand that the design must be shown in order to prove its existence is not altogether rational, since we ordinarily judge the existence of intelligence from fragmentary and meagre signs, while, certainly, comprehension of plan is not prerequisite to perception of it as fact.

Of ontological theory there are many types, and a few may be here noted with reference to their teleological signification. Materialism is characteristically, though not necessarily, taken to imply mechanical determinism. So far as teleology is concerned it is a theory of blind activity. Its difficulties are the difficulties of all theories which endeavor to identify evolving differences in some homogeneous substratum: if the substrate be made absolutely universal, it ceases to be a useful or even significant concept; if, on the other hand, a plurality of substrata be postulated, all the difficulties that attend the interaction of a plurality of qualities or attributes follow, while the conception of substrate is

again superfluous. A second position is Berkeleyan idealism, which transfers to God's consciousness, and to other consciousnesses, the whole content of experience. Teleologically this view might be made satisfying, but it would have to be made more than a monad-like reduplication of experiences, which fails to solve the problems of any one. Hegelian idealism explains the world as the evolution of an Absolute. The inconsistency inherent in the notion of an Absolute evolving toward an end not already realized in itself leads to the nihilism (it is nothing less) of Mr. Bradley.[1]

[1] Hegel's Absolute represented a process rather than a static content, but at the same time the process was conceived to be completed, and it is only an Hegelian who can reconcile the notions of an evolution at once active and ended. Where the completeness is taken to represent the perfection of the form of the activity and not its fruition, the doctrine is intelligible. But the notion of activity is subject to strange misuses. Self-activity, for example, is perfectly intelligible so long as it is taken to mean an activity originating with a given subject. But if self-activity be taken to mean subjectless activity, it is quite unintelligible. Again, we meet the phrase "unchanging activity"; and this, too, is clear if it means an unchanging form of activity. But if it means an activity in which there is no change (cf. "On the Conception of *ἐνέργεια ἀκινησίας*," by F. C. S. Schiller, *Mind*, vol. ix, N. S.), it is nonsensical. Activity may be conceived either as motion or as change. Motion always involves change in space, but change, as of thought, may be merely in time. If, in saying that the Absolute is activity, motion is meant, the thing is confounded with its measure. But if the activity of the Absolute be understood as thought activity, there is encountered a curious consequence. For thought which involves universal ideas is essentially representative, and true of some reality other than itself. Now if the Absolute itself is thought, it can be true of no reality, for there is but one Absolute and it is the reality. In such case the Absolute would be nothing but a colossal fiction, and this is pretty nearly what Mr. Bradley offers. In a passage in his *Principles of Logic* (p. 449) he answers the question, What should we get if we were to realize our ideal of what reality must be? "We should get a way of thinking in which the whole of reality was a system of its differences immanent in each difference. In this whole the analysis of any one element would, by nothing but the self-development of that element, produce the totality. The internal unfolding of any one portion would be the blossoming of that other side of its being, without which itself is not consummate. The inward growth of the member would be the natural synthesis with the complement of its essence. And synthesis again would be the movement of the whole within its own body. It would not

He accepts the contradictions of experience as proof of our inability to know, and then hypostatizes the unintelligible as an Absolute, not essentially different from Mr. Spencer's Unknowable. Another view is that of Prof. Royce, who sees in the Absolute an apotheosized self, *the* Individual. At first sight, this is eminently satisfying; but when we try to find the self that we know—which serves as the basis for the metaphor,—we cannot identify it with any segregated part of experience. Yet if we include objective as well as subjective experience in this self, we must thereby include that reference to a ground beyond, which first impelled the inference of an absolute. Nor can we well avoid including this reference in the being of the Absolute Self drawn on the analogy of our own, while if we do include it, we are led into an infinite series of selves and absolutes, each referring to another, which shall serve as its ground. The same difficulty appears again when we ask, Can the Absolute know representatively? If it can, there exist the known realities not contained in the Absolute experience, but only there

force its parts into violent conjunctions, but, itself in each, by the loss of self-constraint would embrace its own fulfillment. And the fresh product so gained would renew this process, where self-fission turns to coition with an opposite and the merging of both in a higher organism. Nor would the process cease till, the whole being embraced, it had nought left against it but its conscious system. Then, the elements knowing themselves in the whole and so self-conscious in one another, and the whole so finding in its recognized self-development the unmixed enjoyment of its completed nature, nothing foreign would trouble the harmony. It would all have vanished in that perfected activity which is the rest of the absolute." As poetry such an Absolute is all very well, but as "a way of thinking" it is meaningless. What we have in it is a process that never runs its course, a tension of complete analysis and complete synthesis the elements of which absolutely coincide. There could be no motion and no change in it, lest the whole lose its equipoise and become infected with the poison of relativity. It is absurd to speak of such a state of eternal balance as activity—more absurd to liken it to thought, for we cannot conceive thinking except as a process and a thinking of something. A paralysis of ideas such as this Absolute could be no thinking at all.

represented. On the other hand, if it cannot know representatively, is not the supreme characteristic by which we find in ourselves that organic intelligence which makes us individuals done away with? Should we not have a blind Absolute, blind by very reason of the superlative radiance of a knowledge which must be unreflectingly immediate? It may be that we should, but there is an alternative; for there might be a type of immediate knowing which is not mere likeness of insensate fact, but is only to be described as insight. We have inklings of it in our own finite experience, and we do not find it inconsistent with self-realization. And if it indeed exists as the final luminous self-sufficiency of knowledge, it might give us metaphysical ease.

CHAPTER VIII

TRUTH AND ITS CRITERIA

36. At the beginning of this essay it was asserted that the desire to know is but the expression of those needs of human nature which condition the exercise of human activities and occasion the higher evolution of man. It is a task yet to be performed to define more precisely what is meant by these needs, and especially what is meant by that one which demands for its satisfaction a metaphysical explanation of the universe. To this task our attention is now addressed.

It should be noted, first of all, that the desire to know is itself a psychical fact, and the need of which it is the expression is a *felt* need. Whether every organic need is at some time or other self-expressed in consciousness is not certain; but it is certain that the greater part of them are so expressed, and especially is such expression likely to occur with the more complex requirements of higher organic development. Indeed, from a strictly biological point of view, the one function of consciousness appears to be to give expression and factuality to those needs for complex adaptation which enable evolution. Accordingly we must find in the psychical history of man the real reasons for his intellectual, and perhaps physical, requirements. It is certain at least, of the physical, that we cannot understand them apart from what we call the higher needs; but it may very well be, also, that the intellect itself, with all its variegated furnishings, is only an interpretation and representation of a physi-

cal universe to which we are bound by our physical necessities. Such, in fact, appears to be the meaning read into human experience by those cosmophiles who, in their awed contemplation of the wonder of the physical universe, cannot escape a certain contempt for the feebleness of human life and the paltriness of the soul and its desires. Yet if it be shown, as seems inevitable, that the cosmos itself is understood only in the language of those desires, and that, so far as we can know, it exists only as their reason,—or, if we choose to put it so, the desires exist only as the reflection of the cosmos,—it is incontrovertibly sure that we must conceive the world to be rational and rational in the same sense as human experience. Indeed, this is tautology,—for what we mean by rationality is nothing more than the final reasons which we are forced to give for our experience, and these, as is just said, must be sought in the history of the origin and satisfaction of our organic needs.

That this argument, or explanation, is tautologous does not militate against its vitality and force. For in last resort every argument must be tautologous; that is to say, every argument must be designation of some known fact, an appeal to the immediate experience which alone can make it comprehensible. Human experience is thus an *argumentum ad hominem* for the rationality of the universe; it is the world's argument for its own sanity, and is clinching just because we have formed a concept of rationality and understand what we mean by it. Literally man must be a reflection and an image of the world which has created him, or at least of that part of the world concerned in his creation. If we reject solipsism, as we all do, we can find in the world that exists beyond the boundaries of our experience nothing that is not contained within that experience; and again the only rationality that we can find within experience itself must be the reason and rationality of the mould in which it

is cast. It may be that this argument is of a piece with Anselm's, but it furnishes the sense in which the Anselmic reasoning is valid.

Any interpretation of the need for metaphysical explanation can be rendered intelligible only with reference and relation to more immediate and practical needs. At the basis of all are those physical and physiological requirements for sense-perceptions and the exercise of functional activities. These requirements may not be consciously felt, or are felt only in the lack of timely satisfaction; but this fact alone cannot serve to distinguish them from requirements which we are accustomed to call ideal and higher. Roughly the two types may be described as needs for immediate and needs for ideal experience, though this, again, is not accurate, for at the last all needs require satisfaction in some form of immediate experience. We may best say that there is, first, a need for realization, whether it be the mere satisfaction of the demands of the physical organism or the attainment of that which is ideally held before the mind as the object of desire; and, second, a need for truth, and this is the need for knowledge or insight which ordinarily we characterize as the intellectual need.

The practical nature of the need for truth, and the causes which led to its generation and development, cannot fail to be seen when we come to consider the function of representative knowledge. For it is by means of such knowledge that that indefinite expansion of experience *in potentia* which has given man his vast superiority in the animal world has been enabled. It is this which gives rise to generalization, to the perception and apperception of the more complex unities of experience, to identification of the persistent in change and cognition of the stable and reliable, and finally to foreknowledge and prediction, permitting preparation for what is to come.

But the very fact that the desire for knowledge and truth is created by our need serves to limit the knowledge attained to that which satisfies the need. It is true that the desire must always run a little ahead of its possible satisfaction. There must be a perpetual seeking for more than we can attain. Aspiration is the *motif* of evolution. But the need must not be too great, we must not reach out too passionately for that which is far beyond, lest the desire defeat its own end and instead of growing into attainment we perish of despair. And so it is fair to say that all our knowledge and even that which we wish to know, the truth we seek, is determined by but a little fraction of the universe which has created us. We dwell within a little islet of fact, and so long as we can find it harmonious in form and color and seemingly ruled by reason, we are very well content. What is of interest metaphysically is that we *know* it to be an islet and not the whole world, and again that we desire to know what it means in the plan and geography of that whole world. This is our desire for metaphysical truth—a desire to know what our island means for us, what its purpose and end. That the meaning must be sought in the desire, the truth in its anticipation, is not paradoxical; for this is the case with all our meanings and all our truths. It is so in our merely physical genesis; it can hardly be conceived to be otherwise in our intellectual evolution. The demand for an end, or design, is both the essence and the reason of the desire, and the design is itself contained in the desire, or at least in the causes which make it purposeful. The only question is how far truth and realization need or do correspond, and in order to answer this question we must analyze the meaning of truth.

37. Truth has various meanings. Amongst these, three stand out with special clearness. First, truth is often identified with fact. The bare fact, we say—meaning simple qual-

ity or content apart from any implied significance—is the bare truth of a thing or event. In this sense we find the true being of anything in the elements that compose it; as, for example, the true being of water is as a combination of oxygen and hydrogen, the simplest qualities into which we can resolve it,—or, again, the whole truth of an illusion we ascribe to the subject's mind, meaning that it lies in the mere fact of the illusion itself. But we must discriminate more than one meaning of 'fact.' Most precisely, a fact is a simple, unanalyzed qualitative content of experience, never referring beyond the time and place in which it is given. It is the superlatively concrete *esse* of anything whatever. This meaning is often extended beyond the immediately given, so that fact comes to stand for reality in general. Whatever is qualitatively real, in that case, is fact; and nothing but fact is real. Fact is thus made the objectified as well as the immediate essence of things and comes to stand for that which is independent of knowledge, or at least not dependent upon its immediacy for its factuality. Again, fact is understood as scientific fact, where what is meant is scientific description of simple qualities. As such description always involves enough theory to make it 'scientific,' there is contained in it quite as much theory as fact, in narrow sense, so that it is not unusual to encounter an appeal to facts to support a scientific theory which is presupposed and embodied in the evidence cited. In all these uses fact and truth are apt to be used synonymously: the bare fact is the mere truth, factual reality is the true reality, and scientific fact is not to be distinguished from scientific truth.

A second meaning of truth is that which understands by the truth of anything its true description. Here truth is never identified with fact, but is always true of it. In other words, 'true' is an adjective of knowledge and not of reality. And the truth so conceived can never be the same as the

reality of which it is true, neither as self-same with this reality nor as its exact likeness; for truth which is only true knowledge must be symbolical representation of reality, differing from reality as whatever exists in time and space differs from what is ideal and universal. Reality is what is meant by truth, it is what truth designates or represents; but the representation, the truth itself, is neither more nor less than the meaning of reality. By this I mean that *our* truth is our understanding of reality as it affects us. The reason that we try to identify them, make truth and fact coincide, is that the only meaning reality can have for us is as anticipative or retrospective realization of fact of some sort. But the reality and the fact can never precisely correspond with their truth; *ex hypothesi* and by definition they differ from it, since it must always be ideal.

From the foregoing we readily pass to the third meaning of truth, and this is as metaphysical Truth, which is the same as metaphysical Fact. We have already seen that in ultimate speculations ontology and teleology arrive at a common object. The meaning and the being of the universe cannot, in last resort, be distinguished; and it is as meaning rather than as being that we hypostatize our ordinary conception of truth to stand for an ultimate Truth which shall be the essence of an ultimate Reality. Our truth represents our ideal representation of passing fact. Again, it represents our idealization, or anticipatory representation, of fact that is to be or may be, and consequently it comes to stand for what we hold to be best worth while and what we hope for. Hence, when we come to consider the whole universe which must contain in itself the determination of our destinies, it is with reference to these destinies and as the expression of our hope that we appeal to the world's Truth as somehow the better part. But philosophically ultimate Reality or Factuality cannot be distinguished from its meaning, which is its *motif*, which is its Truth.

38. The possibility of error is taken by Professor Royce as ground for an inevitable inference of the existence of a truth with respect to which the error is error.[1] An error, he argues, can only exist as the failure of the erroneous judgment to correspond to some real fact or truth which is meant by it. We cannot even doubt unless there is some reality upon which our doubting is centered. The whole fabric of rational thought and all that is intelligible in common experience is inwoven with the inference of the existence of some independent and necessary truth about which we are liable to err. The erroneous judgment cannot know itself as erroneous, nor in itself be erroneous; its error lies in its failure to express the whole of the fact which is its object, but this failure could not exist unless the object itself existed.

The validity of this argument is not to be questioned. It forever silences the solipsist; for although he need not abandon his solipsism as a matter of belief, he can no longer argue about it. But to the mind of Professor Royce our liability to error not only compels us to infer reality beyond our experience, but it also reveals something of the nature of that reality. The fact of error, he says, implies the existence of an Omniscience in which both the truth and the thought which fails to comprehend it must be present. "An error is an incomplete thought, that to a higher thought which includes it and its intended object, is known as having failed in the purpose that it more or less clearly had, and that is fully realized in this higher thought. And without such higher inclusive thought, an assertion has no external object, and is no error."[2]

If it were to be maintained that with the existence of only such a dead reality as the materialists posit, or indeed with the existence of mere chaos, there still might be a failure of

[1] *The Religious Aspect of Philosophy*, chap. xi.

[2] *Loc. cit.*

our judgments to be true of this reality and so error would result, doubtless Professor Royce would respond that such an error could be no real error at all. There would be no means of comparing the judgments which might err with the realities about which they were judged true, and unless such comparison could be made, that is, unless the judgment could somewhere be *seen* to fail of its object, it would be nonsense to speak of either truth or error. Neither can exist except as judged. But the erroneous judgment cannot know itself erroneous, for then it would have in its possession that the lack of which makes it erroneous; and of course dead matter cannot know or judge anything. Consequently, if there be error, there must be some consciousness to which both fact and fault are present, and by which they are judged fact and fault with respect to each other. Of course such a consciousness could be little less than omniscient,—certainly it must be eternally alert.

The hypotheses upon which this argument rests are that truth and error can exist only for an intelligence which perceives their discrepancy, and that the error and its truth must exist simultaneously. Now it is hardly to be questioned that both of these hypotheses are true, and the argument would be indubitably valid but for the ambiguity inherent in the conception of truth. For so long as truth is conceived as true description and error as faulty description, so long as both are adjectives of knowledge, it is plain enough that neither can exist except for an intelligence of some sort. It is plain, too, that truth and error must exist simultaneously, for neither can be known except by comparison with the other (even truth can exist only as triumphing over suggested false alternatives; to judge anything true, we must first have at least pretended to doubt it), and comparison involves the simultaneous presence of all the terms compared. But truth sometimes means the bare fact, and

in that case there need be no comparison in order that there may be error. It may happen that the error will never be recognized—for aught we know the molecular theory may be quite erroneous and yet it may be held to the end of human days,—but that does not in the least prevent the failure to truly depict reality which is the occasion of the erroneous judgment. Possibly Professor Royce would say that there is really no question of truth and error involved, that the so called erroneous judgment cannot be false to what it means since the meaning is altogether within itself, that the real fact is never brought into consideration. And this must be granted when we take truth and error to be solely adjectives of knowledge, or again if we find no meaning of a judgment beyond its ideal content. But if we distinguish, as we do distinguish (see section 17), the reality of what is meant from the meaning of which we are actually conscious, if we infer any whatsoever undetermined, extra-experiential *beyond*, we must allow for error in all the judgments we make in regard to it. And as for that, the indeterminateness itself is just such an allowance, for we cannot believe that the fact is indeterminate.

Apart from all this, however, it is not at all clear how the inclusive Thought which Professor Royce raises up to account for truth and error can account for *our* truth and *our* error, the truth and error which we recognize as such. It helps very little to know that there is an absolute consciousness to which all truth and error are present, if we cannot rectify our judgments by means of this knowledge. To know so much and no more does not aid us in the avoidance of error, nor tell us why or if our truth is true. Professor Royce has shown us a sure escape from solipsism and perhaps glimpses of a promised land, but he has not given us the clue which shall lead us thither nor any magic touchstone to reveal to us truth from error. The best we can do

is to rely upon experience for revelation. That this reliance is not immediately sure, experience itself has taught us, but it is all we have, and in the long run we may hope to win some gleanings of stable truth. Still it is evident enough that this truth must always be relative, never absolute. Human truth and error exist only retrospectively. That is to say, having experienced or imagined somewhat, we judge it to be true or false according as it is corroborated or belied by what follows in its train. Consistency with experience is our one test of validity. But experience is never complete, it is always subject to change, and our facts are always tentative facts liable to future correction and modification. Hence our truth can never be perfect, never absolute; it must always be relative, human truth. The foundation for our truth and error is the compulsion of fact. For aught we know this fact may be a sort of sham reality, our world a cosmic jest, yet in certain of its primitive forms reality besets us with a persistent iteration that will not permit in us any margin of disbelief. And so we are certain of some things, while not even the most strenuous sceptic has succeeded in doubting all. As time passes and our mental aptitudes become ingrained habits of thought we may grow certain of other things and yet others, and thus the body of *our* truth will grow, whether any of it be *really* true or not.

Truth, then, for us must always be uncertain and relative. We may feel sure that there is a fixed and immutable Truth, the Fact of an ultimate Reality, but we realize that it can never be ours. All we can hope for is that our truth will become more and more like this final Truth, grow into and approximate it, so that eventually we may learn so much of its nature as will serve to show us some rôle for ourselves in the world-play which shall seem to us worth while. And therein lies the useful purpose of philosophy and the value and dignity of its task.

39. But we must have tests and criteria, rules according to which we may select from the puzzling variety experience affords, the proper material for the building of our house of truth. Such criteria are furnished us by the categories of our thought; we can only think as we can, truth can be true to us only as it seems true, final seeming is its final test. But final seeming is not in itself a selecting agent. All it does for us is to limit the range of our choice and determine that our truth must lie wholly within the limits of what is given. It may ratify, and indeed it alone can ratify, a selection offered; but there are other principles which govern selection. The foremost modes of the selection of truth are its natural and its logical selection. By its natural selection I mean the formation of representations of facts whose persistency or iteration in experience forces us to recognize them as constant, and so true. The truth of the permanent and of the universal is thus established. By logical selection I mean that selection by elimination of alternatives which results from comparison of representations of simple fact; that is, the selection of truth by application of the law of contradiction. Natural selection is positive in method, logical selection is negative; the one is determined by iterated identities, the other by denial of opposites.

Contradiction always appears in assertions about facts; never in the facts themselves; facts *per se* cannot be contradictory. The principle of contradiction affirms of any proposition which is true of facts that its negative cannot be true at the same time, or that a thing cannot at once be existent and non-existent. Now such an affirmation is significant only in the province of representative knowledge, since in immediate knowledge the fact itself is given. Any application of the law or any perception of contradiction involves three processes. First, an abstraction from the fact and an ideal representation of its truth together with its contradic-

tion. Second, a comparison of these representations and an effort to conceive them as coëxistent in time. Third, a judgment of the failure of this effort, and with this, if the case is actual, an affirmation of the truth of the true alternative (its accuracy as representation of the fact) at the expense of its opposite. In all this the question at issue is, What is the truth about the fact? And it is in the alternative suggestions that offer themselves as candidates for truth that the contradiction arises.

The same characteristics may be restated in a consideration of contrariety. The comparison of contraries is in every case an ideal comparison, and the perception of the truth of one of the opposing conceptions is the judgment that it is true description or representation of a circumscribed fact. What contradiction and contrariety both resolve into is a process of definition by elimination. Such a thing as a real contradiction or a real contrariety could not exist, for that would be to assert that some reality could both be and not be, or be black and white in the same way and at the same time. The reason for this is that we have chosen to define being as that which excludes non-being and whiteness as that which excludes blackness. In last resort, no fact can be anything except just what it is and just as it is in every particular. For us this must mean just what it seems to us and just as it seems to us in final seeming. This is our ultimate gauge of reality. The only reason why a question of opposition ever arises is that we cannot retain facts just as they are, but are forced to abstract from them and idealize them. These abstractions and idealizations (substance of all our truth) are such feeble reincarnations of fact that error is bound to result from their manipulation. It is in guarding against such error, by means of eliminative definition, that the conflicts of mutually exclusive and opposite representations serve us.

40. The foregoing is sufficiently trite, but it may furnish a text for a transitory recurrence to the doctrines of Mr. Bradley. The most incomprehensible feature of *Appearance and Reality* is its assumption of the validity of the principle of contradiction while condemning as mere appearance all that makes that principle intelligible. Whether there is any absolute reality or not, on Mr. Bradley's own hypothesis, the whole fabric of our experience is warp and woof, that unreal-real aspect of the universe which he styles "appearance." Consequently it is only as dealing with appearances that contradiction and contrariety have any meaning or validity. Appearances are the facts in the description of which oppositions may occur, and they themselves must furnish the correction of false alternatives. Our truth, and our error as well, can only be truth and error about appearances (if we stick to Mr. Bradley's term). But appearances themselves (that is, the fact of our experience) cannot in any sense be in opposition to one another. They furnish the *test* of opposition and the *test* of truth. It is conceivable that all our knowledge about our apparent reality might be shown to be false and contradictory; but the proof of the falsity could be obtained only by an appeal to the apparent reality itself, those very appearances which our author condemns as self-contradictory. On any other hypothesis, there could be no valid inferences from the fact of contradiction; contradiction itself could be only falsely apparent.

A ready illustration is furnished by Mr. Bradley's proof that space is self-contradictory, hence mere appearance. He does this by showing that space must be and cannot be either infinitely divisible or indivisible. But neither of these terms has any meaning except upon a presupposition of the existence of space itself. Space could be divisible or indivisible only *in space*. We cannot talk about its divisibility or indivisibility except as spatial divisibility and indivisibility. It

may very likely be that infinitely divisible space (if such exists) is not the same as indivisible space (if this exists), but that is no reason for denying the existence or reality of any space whatever. Certainly, if our talk means anything, some sort of space must exist. A similar argument is used to prove the falsity of time. Time, we are told, must be and cannot be composed of atomic nows. Here the blunder is repeated, for we cannot conceive any division of time except as it is divided *in time*. The argument has no meaning whatever, it is bald nonsense, if time is not real. But the attempt involves an even more egregious *petitio principii*. The very essence of contradiction is as failure to identify objects in time. Facts not temporally coëxistent cannot be conceived as contradictory. If time is not real no one of the arguments which Mr. Bradley offers to prove the unreality of the world of appearances is valid. All of them rely for their force upon the application of the law of identity; but the validity of this law is itself dependent upon those very temporal relations which he is at so much pains to condemn as false. The difficulties Mr. Bradley points out are not in the least to be doubted, but they are all difficulties in our representation of facts, not in the facts themselves. It is a bit absurd to find in our own conceptual shortcomings proof of the falsity and unreality of all that makes truth and reality in any sense intelligible to us.

41. Mr. Spencer's measure of truth by conceivability, or rather by the inconceivability of opposite and rejected alternatives, is only the psychological expression of the principle of contradiction. Whenever a contradictory alternative is judged untrue, it is so judged solely because it cannot be made to *seem* true, it is inconceivable as a true account of the fact which it purports to describe. The mutual exclusion of contradictories and contraries is only the form of the limitation of our conceptual powers. The significance of the

test of conceivability has already been discussed in connection with the meaning of possibility (see section 17) and it is unnecessary to repeat. But of interest here is the fact clearly brought out in this test that all our criteria of truth ultimately resolve into appeal to conceptual impotence. Natural selection of truth, earlier defined, is determined by that necessity of fact, that it be what it is, or that its truth be what it seems to us to be. Logical selection of truth is necessitated by the forms of our thought and the nature of our mental furnishings. The first results from the compulsion of the empirical given, in Kantian sense; the second from that of the *a priori* mould of all our experience.

But we are not invulnerably imprisoned within the world of immediacy if we take this to mean mere quality. The very fact that we feel constraint compels us to infer a constraining ground, whether it be brute matter enweaving us in hopeless toils or a purpose moulding us to its end. The world is not governed by our wish or whim. *Our* world, we call it, but the possessive is not one of mastery. The world's force is something stronger than we can gauge, but we feel it, all our helplessness and frailty in the millings of fate, and because we feel it so keenly we cannot doubt its reality. What is its meaning for human destiny, whither it is hurrying us, we can only guess. But we know that this meaning must be found, if at all, within the limits of experience. To discover it is the whole office and function of knowledge, the whole problem of science and philosophy. True, we are concerned to see but a little way ahead, to find merest fragments of the Truth which is our vague ideal; yet we always are concerned for a little light, a little truth, beyond what is in our ken. And so it is that the real spring of our mental evolution is perpetual seeking, and seeking, too, is the motive of our life.

42. The theme of this essay and its aim is the definition

of the nature of metaphysical explanation. What constitutes such explanation? What is the problem that gives rise to it and what the efficacy of the solution? In the discussions of what we must conceive our need to be, and our knowledge, and our truth, and in the analysis of the character of any explanation whatever, I have endeavored to define the metaphysical problem and to forecast, if vaguely, the form which its satisfying solution must assume. The problem itself may be variously stated: it may be a quest for the essence of things, or for a reality within things themselves, or for their truth. But in every case the real object of the inquiry is the discovery of a ground or *raison d'être* which shall seem to us a sufficient reason why reality is what it is. Such a ground, it has been held, can only be shown to be satisfying when it embodies a motive or a purpose intelligible to us in terms of our motives and our purposes. It is only as revealing design that we consider any action to be reasonable, and we cannot, therefore, find reason in the world-movement except it be shown to have design. The problem of metaphysics is thus *par excellence* the problem of teleology. It might properly be termed the problem of ontology too, if our object were to find the meaning of the universe for itself, since that meaning could not possibly exist elsewhere than within the being of the whole. But it is quite useless for us to hope to know any such meaning, and indeed, knowledge of it is undesirable. What we wish to know and need to know is the meaning of our world and of our life. In this narrower province of human world and human meaning the science of teleology must be distinct from that of ontology; for we may conceive any description of the flow of phenomenal fact to be an answer to the ontological query, and in sooth, any designation of fact to be an ontological account of it, so far forth. But a teleological account must show in that fact a meaning which shall be for us its sufficient reason and its truth. It must interpret our world for us.

If we ask more intimately within what limits and in what modes this interpretation which is to be our final explanation can find place, certain of them we can set and describe. Its intelligibility, we can say, must be in terms of qualities and facts of which we have immediate experience. All that the world can be or mean for us is somewhat similiform with the seemings upon which our ultimate convictions rest, and out of which our ideals are constructed. We cannot say that nothing can be which is not experience, but we can say that nothing can have meaning for us which is not experience. And further we can say that nothing can have a sufficient and adequate reason which is not interpreted to us in the language of our motives and aspirations. No fact can be sufficient unto itself, and no change or action can be understood except on the analogy of human motive and intention. Hence it is that the most satisfactory of all our explanations of the world are animistic. They are such as describe nature in the one language we can grasp, the language of human emotion and impulse. Hence, too, all our philosophy and all our science which is to amount to anything or mean anything must be anthropocentric and psychomorphic.

If yet it be asked, What of truth? Is not all this but a justification of fable and poetry to the cost of that austere mistress in whose service the world's best genius has given all?—there is an answer and a hope. And the answer is, that the truth which we seek and which human genius has ever really served is the very spirit of fable and poetry. And the hope is, that in this human truth which we strive to win may indeed be found the form and feature of that metaphysical, ultimate Truth concerning which we can never really know. And there is reason for this hope. For we find in the human soul the centre of reference for the explanation of all in our world that is or can be made intelligible to us. But the world itself, and even the soul itself,

compels us to infer the existence of a reality beyond the limits of our experience which is its cause and ground. We cannot say what this reality is or what its Truth; but even in conceiving it as the cause of our world we seem to imply that it is like our world. To be sure, the cause may not be like its effect, nor is it necessary that our world and our truth be cast in the mould of the existence that gives rise to them. And yet, if we do not believe this, there is nothing left but agnosticism; while if we assume it and find it reasonable, therein it is reasonable and a ground for faith. Moreover, we can defend such a view against any of those types of explanation which tell us that the final reality is some quality or qualities of our experience and not others, that it is matter or motion or anything of the sort. For such views always involve contradiction, whereas the view which is here taken to be reasonable, even if it cannot be proven true, cannot be shown to be contradictory nor in any sense irrational.

But as to what we are likely to know and what is to be our truth, so far as we can see we are like to know that which will be to our avail and our need. In the end need determines knowledge. This is perhaps the best that evolution has taught us. And though our desires always run a little ahead of the urgent need,—so as to give a motive for evolution, let us say,—still the urgency follows close. And thus we grow in knowledge.

"Ye know on earth and all ye need to know."

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